

Graduation is Not the Finish Line: Building Professional Teacher Identity in
Preservice Teachers

by

Toya Abrams

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Elisabeth “Betty” Gee, Chair
Heather Carter
Matthew Schenk

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ABSTRACT

Teacher candidates completing their senior year student teaching practicum as part of the Mary Lou Fulton Teachers College at Arizona State University are expected to graduate as professional, high-quality teachers who are classroom-ready and dedicated to the profession. One lacking component of the program is the opportunity for teacher candidates to have personalized learning experiences that develop professional teacher identity in addition to the development of enhanced teaching skills. To address this, an intervention of an Action Research Project (ARP) was added to the final semester of the student teaching practicum. The goal of the project was to increase professional teacher identity, which would lead to increased teaching practices and a more favorable outlook on real-world problem solving in teaching elementary students.

This mixed methods action research study included data collection methods to measure how integrating action research into a cohort-based student teaching experience improved teacher candidates' teaching practices, how it affected their professional teacher identity and how they perceived the project contributed to the formation of their professional teacher identity. Frameworks that guided the study included principles from the Theory of Self-Organized Learning and Social Identity Theory.

The participants of the study were seven teacher candidates completing their student teaching experience in an Arizona school district. Data gathered included teacher evaluation scores, results from a "Teacher Candidate Experience Questionnaire," narratives collected from Teacher Learning Conversations and written responses on a Final Reflection.

Results suggested that teacher candidates' teaching scores either slightly improved or stayed the same following the intervention. Professional teacher identity increased through the integration of the project, while student identity decreased. Through narratives collected from the participants, observations of other teachers and classrooms emerged as the most impactful component of the intervention. Participants perceived that observations contributed to their growth as teachers by providing exposure to more diverse situations, prompting them to feel engaged and inspired, encouraging high expectations and fostering ways for them to make personal connections. Observing in other classrooms did not always provide the examples and structures the participants had hoped for, yet this disappointment also added value to their growth as teachers.

DEDICATION

To the girl who helped me find my identity, Jordan Abrams. There is no inspiration greater than you. I am a better person because of you and I did this all for you. You are my world.

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TABLE OF CONTENTS

	Page
LIST OF TABLES	viii
LIST OF FIGURES	ix
CHAPTER	
1 INTRODUCTION	1
National Context.....	1
Situational Context	5
Personal Context.....	7
Concluding Statements and Research Questions	9
2 THEORETICAL PERSPECTIVES AND RESEARCH GUIDING THE PROJECT	11
Introduction	11
Action Research.....	13
Action Research in Teacher Preparation.....	15
Strengths and Limitations of Action Research.....	16
Theory of Self-Organized Learning and the Learning Conversation	17
Identity	19
Social Identity Theory.....	20
Professional Identity Development.....	21
Korthagen’s Onion Model.....	22
Professional Teacher Identity.....	24
Related Study Using Identity Theories in Teacher Preparation.....	25

CHAPTER	Page
Implications	25
3 METHODOLOGY	27
Setting and Participants.....	27
Role of the Researcher	30
Intervention	31
Instruments and Data Collection Procedures	37
Quantitative Data Collection.....	38
Qualitative Data Collection.....	39
Threats to Reliability and Validity	40
Conclusion.....	42
4 DATA ANALYSIS AND RESULTS.....	43
Introducing the Analysis	43
Research Question 1 Processes	44
Research Question 1 Results	46
Research Question 2 Processes	53
Research Question 2 Results	54
Research Question 3 Processes	65
Research Question 3 Results	68
Teacher Learning Conversations	69
ARP Final Reflection	80
Conclusion.....	91
5 DISCUSSION	93

CHAPTER	Page
Discussion of the Complementarity of the Quantitative and Qualitative Data.....	94
Discussion of Results in Relation to the Extant Literature and Theories	95
Discussion of Lessons Learned About Implementation of the Action	99
Discussion of the Limitations.....	100
Discussion of Implications for Practice and Research.....	102
Personal Lessons Learned	103
Closing Thoughts.....	105
REFERENCES	107
APPENDIX	
A TEACHER CANDIDATE STUDY CONSENT AND TIMELINE	113
B TEACHER CANDIDATE EXPERIENCE QUESTIONNAIRE.....	116
C TAP TEACHER EVALUATION RUBRIC	118
D TAP RUBRIC DATA COLLECTION FORM.....	122
E ARP FINAL REFLECTION PROMPTS	127

LIST OF TABLES

Table	Page
1. Comparison Chart of Action Research Steps.....	33
2. Research Questions and Data Sources.....	40
3. Descriptive Statistics of Pre and Post Intervention Lesson Evaluation Scores.....	47
4. Scoring Data of Pre and Post Intervention Areas of Refinement (Problem of Practice)	50
5. Descriptive Statistics for Pre and Post Teacher Candidate Experience Questionnaire Scores: Three Sub-Constructs	55
6. Descriptive Statistics for Pre and Post Teacher Candidate Experience Questionnaire Scores: Student/Teacher/Professional Identity Sub-Construct.....	58
7. Questionnaire Response Frequency Percentages: Student/Teacher/Professional Identity Sub-Construct.....	61
8. T-Test Statistics for Pre and Post Teacher Candidate Experience Questionnaire Scores.....	63
9. Themes, Theme-Related Components, and Assertions From TLCs	70
10. ARP Final Reflection Prompt 1 Quotes and Assertions	82
11. ARP Final Reflection Prompt 2 Quotes and Assertions	84
12. ARP Final Reflection Prompt 3 Quotes and Assertions	87

LIST OF FIGURES

Figure	Page
1. The Onion Model (Korthagen and Vasalos, 2008)	22

CHAPTER 1

INTRODUCTION

National Context

Preparing teachers in the college classroom dates back to the mid 1800's with the introduction of Normal Schools. Through the years, the evolution of the student teaching experience as a way to train teachers has changed drastically, yet one thing remains the same: schools need high quality, well-prepared teachers in our classrooms educating the next generation.

In a summary of findings presented in *Teacher Quality: A Report on the Preparation and Qualifications of Public School Teachers*, The National Center for Education Statistics (1999) reported that “Teachers now are challenged by reform initiatives to meet new requirements that have not been part of the conventional repertoire of expectations for effective classroom teaching and for which many teachers have not been adequately prepared during their professional training” (p. 47).

The Alliance for Excellent Education (2004) reported that 14% of new teachers leave the classroom after their first year of teaching. 33% of teachers leave within three years and 50% of them leave within five years. Because of this high teacher turnover, U.S. public schools have spent over 2.6 billion dollars annually to recruit, hire, provide staff development and manage teachers (Hong, 2010).

The National Council for Accreditation of Teacher Education (1999) reported in their *What Makes a Teacher Effective* series that there is a substantial amount of research stating that: 1. High quality teacher preparation makes a difference in student achievement and when teachers are prepared, student performance increases. 2. Quality

teacher preparation leads to an increase in teacher retention. 3. Teacher preparation has been successful in helping new teachers acquire essential knowledge and teaching skills.

In 1996, the National Commission on Teaching and America's Future published *What Matters Most: Teaching for America's Future*. This report emphasized the importance of creating better conditions for teachers, specifically by training them early. This report's call to action for educational reform efforts toward teacher improvement unveiled goals to work harder to promote a culture of student success with improved professional development for teachers and recommendations for teacher preparation programs to place more emphasis on building longevity in the profession.

Teaching in higher education has come under increased pressures for accountability and improvement (Wilson, 2002). Research supporting the efficacy of consistent initiatives and programs to improve teaching is increasingly important. For example, efforts to promote and increase higher education faculty instruction improvement have proven successful (Light, Calkins, Luna and Drane, 2009) and has set the expectation that quality teacher preparation and development takes time and requires attention.

While each individual student's learning path within teacher preparation may be unique, assessment in teacher education tends to generally concentrate on the evaluation of students' competencies of the knowledge and skills taught during the students' time in the program (Meijer, Korthagen & Vasalos, 2009). Bullough (1997) argues that teacher education must go beyond these easily measured competencies and instead, develop the whole teacher by supporting and examining the self as a teacher.

Garm and Karlson (2005) argue that schools in general and specifically higher education teacher preparation schools' practices are important elements in the new market economy. In conjunction, educational policymakers have put heavy emphasis on competency-based acquisition of skills in education rather than personal development (Korthagen, 2004). Korthagen (2001) argues that real change in teacher education calls for more than just teaching competencies and that the field of education needs ongoing development of research related to personal practice and development carried out specifically from an insider's perspective.

Higher education practitioners on the inside continue to support preservice teachers in the development of professional competencies and skills but don't consistently place emphasis on how these competencies and skills relate, align or conflict with the learners' own unique qualities and values. Additionally, researchers suggest that when instructing best teaching practices to newly forming teachers, professors should include opportunities for them to connect the learning to their own beliefs, vision and identity in order to create the most effective results (Meijer, Korthagen and Vasalos, 2009). These connections are not just a momentary type of personal satisfaction for the learner, but instead, the connections to personal identity can lead to feelings of wholeness and fulfillment which increases job satisfaction and retention (Korthagen, 2004).

In a 2010 study of preservice teachers, Carpenter (2010) found that teacher candidates completing their preservice training at a university in Portland, Oregon felt a lack of connectedness and personal collaboration from their experience. One teacher candidate in the study indicated a strong lack of validation as a result of the disconnect

between the core learning in the teacher preparation program and his own motivations for wanting to be a teacher.

A 2002 study conducted with teachers in New York City found that teachers previously enrolled in a formal teacher preparation program felt that ideas relating to their own teacher identity formation were connected to their formal preservice teacher training. These teachers indicated that their personal views on teaching were developed through their social and institutional processes, which in turn impacted their own professional identity as a teacher (Darling-Hammond, Chung and Frelow, 2002).

Many university programs require two semesters of short-term classroom practicum prior to full-time student teaching. These practicum experiences are tied to coursework related to lesson planning, subject-specific methods, student achievement, data analysis, instructional skills and classroom management. Following the completion of these prerequisites, preservice teachers complete a full-time student teaching experience where the teacher candidate is assigned to one cooperating mentor teacher for the sake of supporting and supervising the gradual increase of teaching and implementation of course assignments. Although field experiences such as student teaching can provide meaningful opportunities to learn and develop as a professional teacher, these experiences can be particularly challenging for the teacher candidate, specifically in the area of personal and professional identity (Zembylas, 2003). While teacher preparation programs across the nation have the grounds to build the whole teacher, there is no evidence that this is happening or a priority for current emphasis within current programs.

Dotger and Smith (2009) provide that teacher candidates working in teacher prep programs operate within a dual world and are constantly alternating between student and teacher roles. This may lead the preservice teacher to feel increased self-doubt, instability and confusion about their future professional role and identity. Preservice teachers must work their way through these emotions quickly in order to find balance and be able to meet expectations from many individuals all at once: mentor teachers, administrators, supervisors, professors, peers, parents and the community (Samuel and Stephens, 2000). These demands and confusions can carry on with the preservice teachers even after their student teaching practicum.

To date, there is a multitude of research indicating that preservice teachers are expected to be complex problem-solvers all while also becoming subject-matter experts and masters of pedagogy (Alsup, 2006) but there is limited research providing evidence of any coursework or educational emphasis on developing professional teacher identity during the process of student teaching as a way to enhance teacher efficacy, promote teacher career satisfaction and attrition and personalization of the learning process. Teacher preparation programs across the nation are lacking in emphasis on the whole teacher and in building professional teacher identity.

Situational Context

Arizona State University (ASU) aims to answer the call for teacher education reform by way of a year-long student teaching approach intended to create highly trained and prepared teachers. In 2011, ASU began its flagship student teaching program, iTeachAZ, in an effort to emphasize mastery of teaching skills, high expectations for

professionalism and to graduate classroom-ready teachers with a full year of student teaching preparation already on their resumes.

As part of the senior year iTeachAZ experience, teacher candidates work full-time alongside mentor teachers while also being coached, supervised and evaluated by a full-time university supervisor located on site. Connecting methods, pedagogy, coursework and practice, the university supervisor serves as a university faculty member who instructs required courses at a school within the school district where the teacher candidates are working. This site-based student teaching approach is a mandatory requirement for all undergraduate education majors at ASU.

Though the iTeachAZ student teaching practicum has gained respect for its high-quality academic and field-based experiences, there is still lack of evidence that teacher prep programs, including iTeachAZ, are putting enough emphasis on the professional and personal development of their newly developing teachers. One promising approach is the careful placement of teacher candidates with their mentor teachers, yet there are still questions surrounding the flexibility of growth as an individual if preservice teachers are spending an entire year working full-time with the same mentor teacher.

Coldron and Smith (1999) emphasize that identity as a teacher is achieved during a specific timeframe and within a specific social space. In an effort to build professional teacher identity during the student teaching senior year practicum, I propose a new expectation of integrating action research conducted by teacher candidates in their final semester of student teaching as a way to build their professional identity while also increasing ownership of teaching and learning as part of building their social self as a teacher.

The senior year residency experience as part of iTeachAZ does not currently have an emphasis or assignment related to personalized action research or building professional identity. This is a missed opportunity for the teacher candidates, who are unaware of this lacking piece of their experience and put heavy emphasis on “just wanting to graduate and be done with school.” With the addition of an action research project as part of the senior year residency iTeachAZ experience, teacher candidates can experience quality components of personalized learning that place emphasis on the development of professional teacher identity. The student teaching practicum is a time of expected risk-taking and therefore, integration of a supported way to build professional teacher identity will promote an opportunity for the teacher candidates to see graduation as not just the finish line but rather, the beginning of their careers as teachers.

Personal Context

For the past seven consecutive years, I have served as the ASU University Supervisor (“Site Coordinator”) and university faculty member (“Clinical Assistant Professor”) for undergraduate elementary education cohorts of teacher candidates completing their required Senior Year Residency (SYR) student teaching experience. Accompanying the daily student teaching experience is the aligned course, Student Teaching in the Elementary Classroom, in which I serve as the instructor for the two consecutive semesters the teacher candidates are required to complete. Within this course, the students complete assignments linked to their actual teaching performance in the classroom, short-term lesson planning, long-term lesson planning, professionalism, student motivation and student achievement goal setting.

An average day as a Site Coordinator consists of visiting teacher candidates in their student teaching classroom and providing feedback on their progress, collecting performance data and serving as a support system for them. Routine classroom visits also include open and/or private conversations with the mentor teacher and providing support for implementing course assignments and/or addressing personal issues. As a Site Coordinator, I compile data on trends I see in the classrooms such as what co-teaching structures are being utilized between the mentors and the teacher candidates and what professionalism areas are strengths and weaknesses for the teacher candidates. This data is used to provide support for different teaching approaches and collaboration in addition to providing feedback to the college and the school district administration team.

In the Site Coordinator role, I also provide personal advice, coaching and support to the teacher candidates while continually maintaining high expectations for professionalism as it relates to the school district's protocol. There are endless opportunities to become personally supportive and involved with the teacher candidates, who actively seek career advice and support with better understanding their roles as both a student and a teacher.

The second component of my job is as an Assistant Clinical Professor, where I use the data from classroom visits, observed performances and professionalism to connect to theory and research in best practices in teaching. I use these connections to drive the courses I instruct the teacher candidates and the assignments I arrange for them to complete. These connections and associated coursework are delivered during set times of the week where the cohort meets as a group to complete the mandated courses that are linked to their student teaching experience.

Concluding Statements and Research Questions

The ideas presented in this chapter provide the context and justification for building professional teacher identity within the senior year teacher preparation practicum at ASU. Across the nation, teachers are expected to be professional role models who are self-aware and committed to their careers, yet research indicates that these qualities are not woven into teacher preparation programs.

At ASU, the iTeachAZ program offers a year-long opportunity for students to become teachers, yet there is limited emphasis on building ownership of professional teacher identity alongside of the teacher technical skill-building. This action research study aimed to build professional teacher identity during a teacher preparation student teaching practicum by integrating a personalized action research project based on teacher candidates' own teaching refinement areas. This action research project promoted personalized teaching and learning as part of a cyclical process that built reflective skills and personalized learning through self-evaluation and social constructs. This study aimed to measure how the action research process contributed to improved teaching practices in addition to building professional identity along with identifying what components of the action research project contributed to the building of professional teacher identity.

The research questions guiding the study were:

RQ 1: How does integrating action research into a cohort-based student teaching practicum improve teacher candidates' teaching practices?

RQ 2: How does engaging in the process of action research into a cohort-based student teaching practicum affect teacher candidates' sense of professional teacher identity?

RQ 3: How do teacher candidates perceive the impact of an action research project in a cohort-based student teaching practicum on the formation of their professional teacher identity?

The following chapter presents the literature, theoretical frameworks and related studies that served as the foundations in driving the study.

CHAPTER 2

THEORETICAL PERSPECTIVES AND RESEARCH GUIDING THE PROJECT

Introduction

Teacher prep program approaches vary between different colleges and universities but one consistency throughout teacher certification programs is the expectation of an internship type experience where the teacher candidate works with a classroom of students alongside an experienced mentor teacher. In addition to this field experience, teacher prep programs also offer coursework related to instructional methods, classroom management and pedagogical ideals set to prepare new teachers to be quickly ready to fill the “teacher shortages effecting every state” (Strauss, 2017).

Literature indicates that there is a disconnect between academic learning, field experiences and future application. Capraro, Capraro and Helfedt (2010) argue that simply completing an academic program and attending a field experience internship is not enough to create a competent teacher. The skills learned in the academic classroom do not always transfer automatically to field experiences and future teaching practices. Korthagen (2004) adds that demonstrating competency within a teacher prep setting does not completely prove that a preservice teacher will later become a professional practitioner. There needs to be more emphasis on the personal side of creating a teacher in order to bridge this gap.

Preservice teachers have a small window of time to gain a large amount of both professional knowledge and professional behaviors from their student teaching practicum. Field experience adds a component of real world experience, however, this time spent in the classroom can be challenging for the teacher candidate as he or she

strives to see themselves in their future role as a teacher without the full-time safety net of their mentor teacher and the mentor's own classroom style (Denis, 2017). A teacher candidate completing student teaching may struggle with feelings of self-doubt and instability as they find their place as a teacher professional among their role as a student (Dotger and Smith, 2009). This can lead to feelings of questioning their own identity as a professional teacher.

In order to scaffold the transition from student teaching to the full-time classroom, it is critical to examine the building blocks that contribute to the creation of the whole teacher, specifically building professional teacher identity during the student teaching experience. Although student teaching experiences provide professional development and opportunities for learning on the job, they do not include opportunities to proactively create professional identity among new teachers (Zembylas, 2003).

The previous chapter provided the context for building professional teacher identity in preservice teachers. This chapter includes the theoretical frameworks and reviews of existing literature that guide this action research project. The first section begins by defining action research and what it looks like in education, specifically in teacher preparation and in conjunction with the Theory of Self-Organized Learning. Following the presentation of related studies using action research, the chapter presents identity and describes the overarching framework, social identity theory, around which the study was developed. The chapter continues with an overview of professional identity development and Korthagen's Onion Model, while the latter portion of the chapter takes a closer look at professional teacher identity and how it plays a role in

building high-quality teachers who identify with their professional career of choice. The chapter concludes with the implications to consider from the perspectives and studies.

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RQ 3: How do teacher candidates perceive the impact of an action research project in a cohort-based student teaching practicum on the formation of their professional teacher identity?

Action Research

Action research is defined by Carr and Kemmis (1997) as:

A form of self-reflective inquiry undertaken by participants in social situations in order to improve the rationality and justice of their own social or educational practices, their understandings of these practices, and the situation in which the practices are carried out. (p. 162)

Cochran-Smith and Lytle (1992) define action research more specifically as “classroom-based studies conducted by teachers of their own practice and resembling-university-based research in methods, forms and reporting conventions” (p. 300). This type of study includes multiple interactive steps that occur in a cyclical nature. The steps may include: a) defining a problem, new strategy to implement or focus for action, b) exploring literature to develop a foundation or framework for the project, c) creating a

plan of action that includes data collection, analysis and interpretation, d) implementing the plan and analyzing the results, e) repeating the process again if necessary and, f) determining the implications and sharing the results with others (Wood, 2007).

Action research is a powerful method to bridge the gap between theory and practice of education (McNiff, Lomax & Whitehead, 1996). It is a common-sense approach to both personal and professional development that fosters ownership of learning and opportunities for a practitioner to investigate and self-evaluate their work (McNiff and Whitehead, 2005). The process of action research involves change and understanding as initiated by individuals who take action. Action research is described as a way of living which provides a deeper exploration of both professional and personal challenges (McNiff and Whitehead, 2005). The purpose of action research is to increase understanding of one's own practice while also improving that practice (Carr and Kemmis, 1986).

In education reform, teachers must practice what they preach and foster opportunities to model being “a lifelong learner” (Culture for learning, 2003, p. 13). Action research promotes this idea of education being a continuous and endless process which Tiller (1999) argues is often missing in the motivation and inspirational approaches in teacher preparation. Further, Tiller also explains that when teachers investigate their own practice, they are more satisfied with themselves and their jobs. When student teachers are exposed to a self-evaluative learning process early in their career development, they have more of a likelihood to take personal ownership of their career development and continue this work more authentically in their own practices.

Action research in teaching re-envisions and reinvents the role of a teacher (Wood, 2007) by positioning the teacher as a collaborator who is committed to their career (Cochran-Smith and Lytle, 1999). Being a collaborative teacher-researcher means the teacher must be willing to be vulnerable as he/she struggles to solve problems and see themselves as someone who is willing to question their own expertise in the classroom and search for answers and professional ideas from others (Cochran-Smith and Lytle, 1992; Nelson and Slavit, 2008).

Sexton (2008) found that when alignment of personal goals along with program expectations occurs, preservice teachers experienced more agreement and compatibility with their teaching program. Action research provides opportunities for preservice teachers to initiate their own problems within their studies and practice, which prompts them to strive for solutions all while they build ownership of their new position in the classroom.

Action Research in Teacher Preparation

There are a small number of documented examples of teacher education programs that have incorporated action research. One example is from the University of Wisconsin-Madison, where they promote the use of action research in the student teaching component of their elementary education program. The student teaching practicum at the University of Wisconsin-Madison is typically completed during the students' fifth year of schooling at the university and the action research component is integrated during this year. Researchers at the University of Wisconsin-Madison view their work with action research in teacher preparation as “emancipatory” because of its ability to promote reflective practices that transfer to future career practices following the

practicum (Gore and Zeichner, 1995, p. 123). Similar to Alrichter's (1988) ideas on inquiry-based learning in teacher education, the University of Wisconsin-Madison's teacher preparation program holds that action research in their department has three purposes: a) to research one's own practice and situation, b) to be collaborative, and c) to be emancipatory and democratic.

In a 2012 study at a university in Southern California, action research was integrated into a teacher education and certification program as a way to measure perceptions and preparedness for teaching. Lattimer (2012) highlighted from the study that preservice teachers' perceptions of their own expertise changed after using action research. Preservice teachers felt they were more connected to the student learning process and more reflective on their own practices as a result of using action research in their classrooms.

Both of these studies imply that action research in teacher prep has value as a framework for building professional teachers. In both universities, action research in teacher preparation is viewed as a key element of the teacher development process, specifically in supporting preservice teachers as they learn to take on professional qualities and reflective practices. The resulting successful outcomes of these studies have guided this research to further examine how action research affects professional teacher identity and teaching performance practices.

Strengths and Limitations of Action Research

The concept of using action research as a framework for an action study in the education setting is validated by Freeman (1998), who argues that teachers who engage in action research processes tend to be more disciplined, systematic and evaluative.

Strengths of action research include personal and social aspects of learning that encourage continued reflection. From a psychological perspective, action research includes a balance of self-interest and care for others, which both positively contribute to human growth and development (Nafstad, 2005).

Capobianco and Ríordáin (2015) highlight that a challenge in implementing action research in teacher preparation is that during this time, preservice teachers experience a great deal of uncertainty and that conducting action research can be difficult because of the vast amount of skills and tasks that are required to complete the steps. In a study conducted by Capobianco and Ríordáin, preservice elementary education teachers at the National University of Ireland engaged in action research. Following their experience, the preservice teachers shared that their biggest limitations with completing the action research were mostly with the uncertainty of their own ability to fulfill the demands of “doing a good job on the project” (p. 11).

This first part of this chapter has examined action research as a framework for building reflective practices, growth and improvement within education research. The following theory details the framework that guided new teacher researchers who were simultaneously students and were experimenting with the action research process.

Theory of Self-Organized Learning and the Learning Conversation

While action research has been described as an opportunity to link new knowledge with existing knowledge, it differs from traditional research in that it requires practitioners to research their own practices and take ownership of the process and new knowledge gained from the experience (McNiff, et al, 1996). Harri-Augstein and Thomas (1991) introduced the Theory of Self-Organized Learning (SOL) as a way to address how

students become masters of their own learning processes (Zimmerman, 2013) much like what occurs in the action research process. Harri-Augstein and Thomas (2014) stated that “learning to learn” is an emotionally difficult process, but adds that fostering opportunities to learn, such as those included in action research, can connect one to their work in a reflective manner (p. 20).

In considering opportunities to learn and take ownership of the process, the Theory of SOL credits the Learning Conversation (LC) as one of the most effective tools for personal development (Harri-Augstein and Thomas, 1991). This tool, used within social situations, encourages learners to achieve their own learning capabilities and personal growth by talking about the process. With the support of a facilitator, the LC prompts learners to discuss their learning process with the encouragement of questions and prompts related to the learning. The conversations are highly structured and reflective but also encouraging of self-awareness and experimentation (Timmins, 1994).

The LC has been used in both educational and business contexts to create learning cultures that are team-oriented with individualistic opportunities to contribute and foster both creative and personal growth within organizations (Harri-Augstein and Thomas, 1991). When learners participate in a series of LCs over time, they tend to appreciate, better understand and extend their learning as part of a process that bolsters action and development in their relative situations. This prepared participation in a personalized reflective teaching and learning social setting also builds trust and confidence within the participants as they accept and provide feedback and ideas in a constructive setting (Timmins, 1994).

Danielson (2016) also provides a similar perspective, stating that professional conversations are the most influential aspects of professional development. Her emphasis on talking about teaching as a way to build collaborative practices and teacher development promotes inquiry and builds teacher self-assessment. Further, Danielson states that conversations following educational experiences have the greatest impact on teacher practices and the culture of learning and goal setting as it provides opportunities for educators to recognize and talk about themselves in the role of a teacher as they identify with teacher practices.

The Theory of SOL and opportunities for teachers to discuss their learning as professional collaborators, such those offered in the LCs, provide a framework to support newly developing teachers as they begin to see themselves as individuals transforming from a student to a teacher. The Theory of SOL and LCs imply that development of a whole teacher includes opportunities for self-reflection, collaboration and emphasis on identity development.

The following components of this chapter start with a broader view of identity theories that have informed the study and then transition into more specific and relevant identity theories such as those that justify the need for building professional teacher identity in preservice teachers.

Identity

The concept of identity is multi-faceted and can be complex and abstract. Identity consists of an individual's characterization, status, existence and self-identification. It also includes the uniqueness, individuality and personal qualities that either connect an individual to others or set them apart from others (Deschamps and Devos, 1998).

The environment plays a key role in positioning an individual to develop their own identity (Clayton, 2012). Doise (1998) goes a step further to say that within an environment, personal identities are “a social representation, an organizing principle of individual positioning in a field of symbolic relationships between individuals and groups” (p. 23). If identity forms through an environment of social exchanges, the student teaching experience sets the ultimate stage for professional teacher identity formation.

Social Identity Theory

Social identity influences behaviors in group situations and is a critical factor influencing learning within organizations (Korte, 2007). Tajfel (1981) proposed the idea of social identity theory to explain a person’s sense of who they are based on their group memberships. Groups in which people belong to are an important source of pride and self-esteem. They give individuals a sense of their own social identity and a sense of belonging to the social world.

Hogg (2011) defines a social group as more than two people with the same social identity. These people identify and evaluate themselves in the same way and have the same definition of who they are, what attributes they have, and how they relate to and differ from people who are not in their group. In order for a person to feel a common identity with a group, they must feel a sense of belonging, identify with the group, define themselves in terms of the properties of the group and think, feel and behave as a group member. Social groups are formed at multiple levels and are an important subject to consider in social work behavior, including those that lie within educational settings.

From social groups, there is social identity, which is defined as group membership and behavior to explain how individuals make sense of themselves and other people in the social environment. These memberships and interactions help individuals create identities as they relate to others (Hogg, 2011).

Social identity in education implies that teachers' professional identity includes how teachers perceive themselves as teachers. This is based on their own interpretations of how they interact within their context and setting. This identity is constructed by repeated interpretations of experiences and encounters (Beijaard et al, 2004). Further, the concept of social identity theory in teacher education is defined by Reid and Deaux (1996) as an identity constructed in educational practices and discourses that are the results of the continuing interaction between the person and their context.

Professional Identity Development

A professional is someone who has been prepared for a profession by having completed a program of detailed preparation that includes specialized knowledge expected to be owned by those in the same profession. Professionals are approved by their professions as practitioners who are connected to their work by being registered and/or certified in their area of expertise and exercising autonomy and professional judgment in their field (Smith and Lovat, 2003). This type of dedication to a particular field of work also includes attention to ethical codes of conduct and commitment to their job outside of the traditional workplace.

Professional identity can be explained as “the relatively stable and enduring constellation of attributes, beliefs, values, motives and experiences in terms of which people define themselves in a professional role” (Ibarra, 1999, pp. 764-765; Schein,

1978). Having a professional identity signals to others that an individual owns a specific set of unique, skilled, or scarce abilities (Van Maanen and Barley, 1984) and “belongs” to an organization (Pratt, Rockmann and Kaufmann, 2006, p. 236).

Korthagen’s Onion Model

Development of professional identity can be further examined through Korthagen’s Onion Model (2004), which emphasizes that development and functioning of a professional includes six layers. Each layer of the onion rests upon the deeper layers and each layer involves a competency that is individually important but still connected to and surrounding the other layers. Figure 1 below presents a visual of the model with each of the layers.

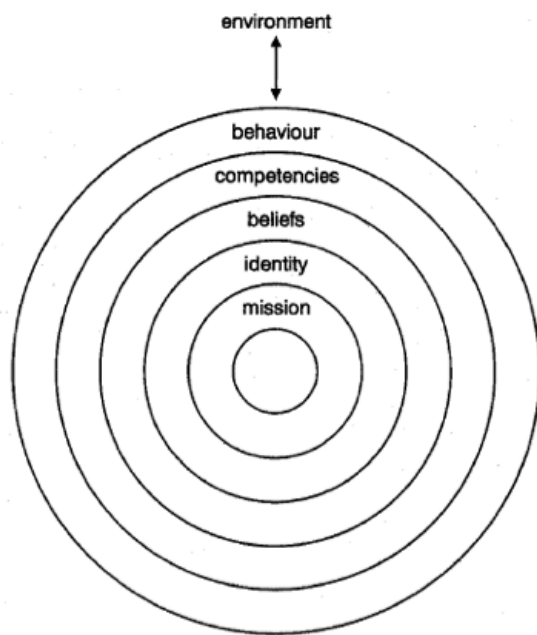


Figure 1. The Onion Model (Korthagen and Vasalos, 2008)

At the core of the onion is an individual's mission, much like the personal goals, vision or dreams one holds important. This concept is the central driving force of individuals. This key element is then surrounded immediately by identity, which Geursen, Heer, Korthagen, Lunenberg and Zwart (2010) call "being aware." Korthagen and Vasalos (2008) further explain that identity is then influenced and surrounded by the other layers that make up the development of a professional: environment, behaviors, competencies and beliefs. The Onion Model provides an effective framework for organizing an action research project within a student teaching field experience as each layer can be addressed within the cyclical, reflective and collaborative components that are characteristics of action research.

Ibarra (1999) studied how individuals adapt to their new roles by experimenting with their provisional selves that were defined as "not fully elaborated professional identities." Data collected from the participants in this study yielded that in order to adapt their new roles as professionals, individuals required opportunities to: 1. Observe role models in order to identify the potential identity to own, 2. Experiment with their own provisional selves, and 3. Evaluate experiments against internal standards and external feedback.

This study implied that if individuals need to experiment with multiple "layers" before locating their own identity, Korthagen's Onion Model (2004) is a valuable framework for examining the development of professional identity. Korthagen's Onion Model encourages a deeper look at what personal competencies need to be addressed and considered when building a professional, while Ibarra's study went a step further and included the specific steps to consider as part of the professional-building journey.

Professional Teacher Identity

Professional teacher identity includes the ways teachers view themselves within their own environments and social groups. A teacher's sense of professional identity is a reflection of their own job satisfaction, commitment to the occupation, self-efficacy and motivation (Watt & Richardson, 2008). These areas are interrelated and should be looked at within both the context and the social aspects of teaching. Chong (2011) stated that in the development of professional teacher attributes, it is just as important to learn how to *be* as teacher as it is to learn *how* to teach.

In a study conducted by Coldron and Smith (1999), the researchers concluded that formation of professional teacher identity must first start with mature individuals who are willingly active participants in the educational field. Further, professional teacher identity development involves dialogue related to their practice and their community of colleagues in addition to participation in best practices of teaching. Coldron and Smith (1999) argue that teachers should be “empowered to work and debate with fellow practitioners so that they can watch and learn from one another” (p. 722) and that these social opportunities become the “active location” of the construction of their professional identities.

Hammerness, Darling-Hammond, & Bransford (2005) advocate for the development of identity as a teacher to be considered as an important aspect of building professionalism and creating commitment to their work as a teacher. A developed professional teacher identity leads to more intrinsically motivated educators who feel responsible for their own success.

Related Study Using Identity Theories in Teacher Preparation

Influences from both internal and external sources shape a teacher's perceptions of how they view themselves as teachers (Olsen, 2008). Their interactions within multiple contexts are what lead to their perceptions of job satisfaction, ability to feel commitment to the job and self-efficacy (Day, 2002). The following study highlights the impact that social identity development in conjunction with professional identity development can have on identity development within a teacher preparation program.

Friesen and Besley (2013) studied preservice teachers' perceived teacher identities as they began and completed a teacher prep program. The study aimed to examine the predictors of teacher identity from a developmental perspective over the student teaching timeframe. The study concluded with data indicating that an individual with a well-formed sense of personal and social identity is more likely to be ready to begin the process of forming a professional identity. The findings also pointed to building professional teacher identity as a developmental and social psychological process was an integral part of teacher preparation. Friesen and Besley advised that, for teacher educators, this study highlighted the need to be cognizant of the profound impact that teacher preparation programs can have on identity development.

Implications

The aforementioned theoretical perspectives and aligned studies highlight how identity theories are relevant in guiding the use of an action research project to develop professional teacher identity in higher education teacher preparation. Teacher education programs have the potential to facilitate learning environments that are built on research-

based learning principles for adults while also building professional identity for teachers as they prepare to transition into their own classroom leadership roles.

Billington (2000) suggests that if an adult learning program is to be highly effective it should encourage intellectual freedom and creativity, foster opportunities for teachers to treat students as peers and partners in the learning process and provide an environment where students can direct and take responsibility for their own learning processes and outcomes. Billington also includes that proper pacing of learning materials can create optimal intellectual challenges and active involvement in the learning process along with constructive effective feedback on performances are essential. Each of these characteristics contributes to the development of professional identity and is a byproduct of using action research within a higher educational setting.

As higher education continues to experience a steady demand to meet the needs of unique learners in an effort to produce quality professionals, one must consider further research in the area of building identity for teacher professionals. With the inclusion of an action research project in the student teaching practicum as part of the intervention of this study, this research serves to provide additional literature on the topic of professional teacher identity and the components that contributed to its construction during the student teaching experience. The following chapter provides the methodology used in implementing the study.

CHAPTER 3

METHODOLOGY

The previous chapter provided the research, associated studies and theoretical frameworks that highlight the need and importance for building professional teacher identity in the student teaching experience. This chapter will provide a description of the setting, the participants, intervention and overall research design, including how data was collected and analyzed.

Setting and Participants

This action research study took place during a sixteen-week academic semester in the fall of 2018 in a rural school district in Arizona. The district included five elementary schools, one middle school and one high school located in an affluent small community. The district is uniquely known for its high level of teacher retention, abundance of community and parental involvement and district administrators who are highly visible in schools.

The Arizona Department of Education (2018) reported the demographics of the elementary (kindergarten through sixth grade) school used in the study as 82% Caucasian, 8% Hispanic, 3% Asian and the remaining 7% being other multiple races. The school's population included approximately 650 students with 35 academic professionals (teachers and administrators combined) employed and working on campus. The school included a large gifted population of students and typically has high student achievement, with its most recent accomplishment consisting of an "A" school rating by the Arizona State Accountability A-F Letter Grades system for the 2017-2018 school

year rating. This state rating system measures year to year student academic growth and proficiency in English language arts, math and science.

The study setting also included a middle school in the same district. This middle school, located next door to the elementary school, had a student population of 935 students with 48 academic professionals (teachers and administrators) employed and working on campus. The student body demographics included 84% Caucasian, 10% Hispanic, 3% Asian and 3% of other races combined. Much like its elementary school neighbor, the middle school has also achieved an “A” letter grade rating by the Arizona State Accountability A-F Letter Grades system for the 2017-2018 school year rating.

As a contracted partner district with Arizona State University’s iTeachAZ program, the school district housing both schools used in the study agreed to provide meeting space for an ASU classroom within a school in the district. The meeting space classroom was located inside of the elementary school in the district used in the study and was where the participants attended their college classes one day of the week for the full day. During the other four days of the week, the participants worked in their student teaching placement along with their assigned mentor teachers.

The school district provided one mentor teacher per teacher candidate as a coach and support system for them while they worked full-time in an elementary or middle school classroom. The mentor teachers are required to possess a current Arizona elementary education teaching certification and have taught for a minimum of three previous years. School principals and district administrators selected and recommended the mentor teachers based on the teachers’ leadership in the district and their reputation on the school campus. The mentor teachers that supported participants in the study met

or exceeded these qualifications. One of the mentors was a former graduate of the same student teaching practicum currently in place for the participants.

The participants of the study were seven ASU senior-year elementary education majors who completed their full year student teaching practicum placed in classrooms with mentor teachers at two different schools in the district: one elementary school and one middle school. The participants were all female, first-career students with ages ranging from 21 to 27 years old. Three of the participants were Caucasian, two were Hispanic, one was Native American, and one was an international-born student from Russia.

The seven participants were members of a cohort-based student teaching model and previously completed a semester of student teaching along with associated coursework while they worked in the same school district in the spring of 2018, one semester prior to the study. During their previous semester, the participants attended ASU courses for one and a half days (completing four required courses) and worked in classrooms with a mentor for three and a half days. In their second and final semester of student teaching in the fall of 2018, they were all enrolled in two ASU required courses. One of the courses was the student teaching course (EED 478) and was associated with student teaching performance and professionalism. All participants were enrolled in the student teaching course in addition to another course, which addressed special education topics and collaborative practices in the elementary education classroom (SPE 416).

Participation in the study was voluntary and there were no consequences for non-participation nor rewards for participation, other than opportunities for increased learning of teaching and professional skills. Seven teacher candidates completing student teaching

in the cohort and consecutively enrolled in the student teaching course were invited to participate in the study, which took place from August of 2018 to December of 2018. On the first day of the semester, the eligible teacher candidates were presented with a “Teacher Candidate Study Consent” form that also included a timeline of the project along with details of each step and time commitment of the project. The consent and timeline are included in Appendix A. All seven of the teacher candidates opted in to participate in the study. One teacher candidate in the cohort was not eligible for participation because she had been hired as a teacher of record for the semester and would not be working directly with a mentor teacher.

Role of the Researcher

As the instructor of both the EED 478 and SPE 416 courses for the teacher candidates, I led weekly course instruction for the participants as students. As the University Supervisor for the cohort, I was also the evaluator of their teaching performance and professionalism. The teacher evaluator role requires that I maintain mandatory yearly certification as an NIET (National Institute for Excellence in Teaching) TAP evaluator. The University Supervisor role required that I routinely conduct formal evaluations of the teacher candidates’ performances using NIET’s TAP Teacher Evaluation Rubric, along with instruction on the rubric as part of both semesters of the senior year student teaching course. The TAP Teacher Evaluation Rubric is used exclusively as ASU’s student teaching evaluation rubric because of its high expectations and use in schools as an in-service teacher evaluation tool. I successfully completed the NIET TAP evaluator certification in February of 2018, which remained valid for the

following year. The TAP Teacher Evaluation Rubric, included in Appendix C, was used as the lesson evaluation rubric in the study.

As the “Site Coordinator” and “Clinical Assistant Professor” for the full year student teaching experience, I previously spent a semester working with the participants as the instructor for their four courses and as their evaluator and supervisor before the semester of the study. After closely working with the participants for a semester, I established working and jovial relationships with them. Because of my close relationship with the participants as their instructor and supervisor, they may have felt obligated to participate in the study and their responses may be exaggerated to indicate a favorable experience in an effort to impress me as their supervisor.

In order to minimize feelings of obligation or potential bias, I integrated multiple data collection opportunities that kept responses anonymous. As a researcher, I presented all information and data to the participants in a professional manner and maintained professional communication with the participants at all times. I fostered opportunities for the participants to share ideas in non-judgmental, anonymous settings and did not share the research focus or data with the participants while the study was being conducted. In keeping consistent with the Family Educational Rights and Privacy Act (FERPA), I did not share any data or performance information between participants.

To eliminate the potential for researcher bias or favored results, an additional certified inter-rater reliability NIET TAP evaluation scorer was used to score and report data on the final post intervention lesson.

Intervention

The intervention of the study integrated an Action Research Project (ARP) into one semester of the student teaching practicum. The goal of the ARP was to improve teaching practices and promote the formation of professional teacher identity. The ARP intervention was a structured component that was not already in place or in any way similar to any of the other assignments in the year-long student teaching experience, nor was it similar to any coursework prior to student teaching for the participants.

The ARP took place over a 16-week intervention timeline and began in week one with participants attending an action research professional development session led by the researcher. The participants did not have any prior experiences with action research so the process was explained to them in detail and related to their own situational contexts. The action research professional development session was a two-hour workshop where participants learned what action research is, how and why a teacher would use it and what the expectations are for the ARP they will complete.

Table 1 presents the steps in the action research process as provided by Sagor (1992) and Kemmis and McTaggart (1990) along with Wood (2007). These steps were used as the basis for the ARP steps and timeline. The steps of the ARP include: a) teaching a lesson and finding a problem of practice, b) conducting a literature review, c) collecting data related to the problem of practice, such as artifacts from interviews and journals from observations, d) participating in Teacher Learning Conversations (TLC) and teaching a lesson to observe a change in the problem, and e) completing a final written reflection.

Table 1

Comparison Chart of Action Research Steps

Action Research Steps by Sagor (1992) and Kemmis and McTaggart (1990)	Action Research Steps by Wood (2007)	Action Research Project
1. Problem formation	1. Defining a problem, new strategy to implement or focus for action	1. Attend an ARP information session. (Week 1). Deliver a performance assessment lesson and use the refinement area and score from the lesson as the “problem” (Weeks 3-5).
2. Data Collection	2. Exploring literature to develop a foundation or framework for the project	2. Provide a literature review of articles, research and data that supports rationale and tips for improving or changing the “problem” (Weeks 5-7).
3. Observing	3. Creating a plan of action that includes data collection, analysis and interpretation	3. Conduct a series of observations of teachers who are skilled in the “problem” area and collect artifacts and journal ideas related to improving the “problem” (Weeks 7-11).
4. Reflecting	4. Implementing the plan and analyzing the results	4. Participate in a TLC with other participants in the cohort to discuss the ARP and results (Week 9 and 11), Deliver a second performance assessment lesson with the intent of improving the “problem” refinement area and score (Weeks 12-14).
5. Action Planning	5. Determining the implications and sharing the results with others	5. Create a written reflection of the experience, results and action steps (Weeks 14-16).

During the first month of the final student teaching semester, the participants planned and taught a pre intervention lesson, where the researcher observed and collected written data on the performance. In a post conference with each individual participant, the researcher and participant identified a refinement area based on the participant's performance. The refinement area was an area of emphasis for future growth and improvement and was agreed upon as the area of focus by both the researcher and the participant collaboratively. This refinement area served as the "Problem of Practice" for the ARP and was assigned from one of seven indicators on the TAP Teacher Evaluation Rubric used to evaluate all ASU senior year teacher candidates during formal observations.

The TAP Teacher Evaluation Rubric was the primary student teacher rubric ASU's Teachers College used for evaluation of teaching practices during student teaching. The TAP Teacher Evaluation Rubric's systems have been used as a tool to guide instruction of all teacher prep coursework at ASU and trainings for mentor teachers in partner schools. Components of the rubric are woven into course assignments during junior and senior year courses as a way for teacher candidates to learn skills and expectations of a teacher rubric much like those that are used in local school districts. The TAP Teacher Evaluation Rubric, also referred to as "The System for Teacher and Student Advancement," is a comprehensive model to support and measure educator effectiveness where teachers can learn to improve their instruction while putting a primary focus on student achievement ("Elements of Success," 2019).

The TAP Teacher Evaluation Rubric is used in hundreds of schools across the country and in its authentic form, includes 19 indicators used to measure teacher

performance associated with planning, instruction and classroom environment. To allow for emphasis on key elements of teaching for new teachers, ASU used eight of the indicators of the TAP Teacher Evaluation Rubric as part of the iTeachAZ program. Seven of these indicators were used in this study. The eighth indicator was not included in the study as it was exclusively related to the written instructional lesson plan, which is not a part of an in-person lesson delivery and could not be used as a “Problem of Practice.”

Using the TAP Teacher Evaluation Rubric as a guide, the refinement area and scores for each area of the rubric were presented to each participant individually in a private post conference following the lesson. The areas on the TAP Teacher Evaluation Rubric that were possible options for the “Problem of Practice” (refinement) were: Standards and Objectives, Presenting Instructional Content, Activities and Materials, Academic Feedback, Managing Student Behavior, Teacher Knowledge of Students and Teacher Content Knowledge.

During the fifth through seventh weeks of the ARP, the participants collected and organized a literature review of articles, research and data that supported rationale and tips for improving or changing the “problem.” This collection of literature was organized in an ARP folder provided by the researcher. The literature included articles found in journals, books, photos from their placement classroom, artifacts provided from their mentor teachers or administrators (emails, newsletters, etc.) and notes from course meetings.

In the seventh through eleventh weeks of the ARP timeline, the participants

conducted a minimum of three observations of teachers in other classrooms, schools and/or districts. The observations ranged from a minimum of one hour to a maximum of one full day. The teachers being observed were selected by the participants on the basis of their own interests, connections and/or opportunities. This concept of observing other teachers is based on Handry and Oliver's (2012) research that peer observations are a valuable component in education and are supportive in the developmental process that contributes to improving the quality of teaching.

During each of the observations, the participants collected written journal evidence and if applicable, artifacts (handouts, photos, diagrams) related to their "Problem of Practice". These items were collected by the research together within the folder provided along with the literature review.

During weeks nine through eleven, the participants participated in two Teacher Learning Conversations (TLCs) to discuss the process, reflections on their plan, analysis of their results and to share ideas for future action. During weeks nine through eleven, if they had not begun already, participants were promoted to begin to implement new ideas, research and reflections related to improving their "problem." Participants were encouraged to try new strategies, skills and ideas in their student teaching placement classroom, take action to improve their own teaching and share their results and action steps during the two TLC meetings.

Weeks twelve through fourteen consisted of a second round of teaching (post intervention) evaluations for all participants. The participants planned and taught a formal lesson to their students with emphasis on improving the "problem" refinement area and the TAP Teacher Evaluation Rubric scores previously achieved. The researcher

and IRR evaluator conducted the evaluations, collecting written data to justify scores in alignment with the rubric. The form used to collect evidence, report scores and provide refinement and reinforcement areas is provided in Appendix D.

The researcher provided each participant with feedback and their achieved scores during in-person post conferences following each lesson delivery. The IRR evaluator did not attend the post conferences.

During the final week of the ARP, the participants responded to prompts provided by the researcher in a final written reflection as the culminating step of their experience. This reflection included the participants' perceptions of their ARP experience and the option to provide feedback related to the experience. The written reflection and the folder with the literature, artifacts and journals were all submitted to the researcher following the final week of the study.

Instruments and Data Collection Procedures

The research questions guiding the study were:

RQ 1: How does integrating action research into a cohort-based student teaching practicum improve teacher candidates' teaching practices?

RQ 2: How does engaging in the process of action research into a cohort-based student teaching practicum affect teacher candidates' sense of professional teacher identity?

RQ 3: How do teacher candidates perceive the impact of an action research project in a cohort-based student teaching practicum on the formation of their professional teacher identity?

This mixed methods study employed a sequential transformative design. Creswell

(2003) states that this strategy has two phases but relies on the theoretical perspectives of the researcher as the main guide of the study. Additionally, in a sequential transformative design, Creswell noted that the researcher determines the order of the data collection and then integrates them together at the end of the study. Within this study, both the quantitative and qualitative data are integrated into the interpretation phase of the study and both forms of data connect to the theoretical perspectives that guided the study.

Quantitative Data Collection

The small sample size in this study limits the potential value of quantitative methods. In particular, statistical analyses will only detect large changes in pre and post measures. However, in this study, the researcher used quantitative measures for two reasons. First, the questionnaire used in this study was developed and tested with the goal of creating an instrument that could also be used in future research in the area of measuring the affect of action research on teacher candidates' sense of professional teacher identity. There are limited resources available in this area. Second, TAP scores were used regularly in the student teaching program to assess preservice teachers' teaching performance, and thus were a logical measure to include in the study. Using TAP scoring data allowed for there to be minimal adjustment to the pre-existing program expectations of the participants as students of the program.

During the first week of the semester, the participants opted in to participate in the study and immediately participated in the study's first data collection procedure by completing a pre questionnaire, titled "Teacher Candidate Experience Questionnaire," located in Appendix B. The questionnaire included twelve items with participants responding to items using a six point Likert scale ranging from "Strongly Agree" to

“Strongly Disagree.” The participants completed the same questionnaire during the final week of the semester as a post questionnaire. This quantitative data source served to answer the second research question: How does engaging in the process of action research into a cohort-based student teaching practicum affect teacher candidates’ sense of professional teacher identity?

The second form of quantitative data was collected from in-person teaching observations of the participants. The participants planned and delivered formal lessons for their own students in their student teaching placement classrooms. Using seven indicators from the TAP Teacher Evaluation Rubric, the researcher scored each lesson in person and provided baseline TAP rubric number scores. These scores were used as data for comparison to the final (post intervention) lesson that was also observed and scored similarly. This quantitative data source served to answer the first research question: How does integrating action research into a cohort-based student teaching practicum improve teacher candidates’ teaching practices?

Qualitative Data Collection

The study included two qualitative data sources for analysis in response to the third research question. The first qualitative data source was the narrative conversations audio-recorded from the TLC meetings where the participants shared ideas related to their ARP experiences. An additional data source included participant narratives collected from the written responses to the prompts provided as part of the ARP Final Reflection, completed at the end of the semester as the culmination of the ARP. The personal accounts collected from the narratives of the TLCs and the written statements on the ARP Final Reflection provided data to answer the third research question: How do

teacher candidates perceive the impact of an action research project in a cohort-based student teaching practicum on the formation of their professional teacher identity?

Table 2 below depicts the data sources, data types and their timelines as connected to the research questions of the study.

Table 2

Research Questions and Data Sources

Research Questions	Data Collection Sources
1. How does integrating action research into a cohort-based student teaching practicum improve teacher candidates' teaching practices?	<u>Weeks 3-5</u> : Pre Intervention Lesson Scoring and Identification of "Problem of Practice" (Quantitative) <u>Weeks 12-14</u> : Final (Post Intervention) Lesson Scoring and Identification of change in "Problem of Practice" (Quantitative)
2. How does engaging in the process of action research into a cohort-based student teaching practicum affect teacher candidates' sense of professional teacher identity?	<u>Week 1</u> : Teacher Candidate Pre-Questionnaire (Quantitative) <u>Week 16</u> : Teacher Candidate Post-Questionnaire (Quantitative)
3. How do teacher candidates perceive the impact of an action research project in a cohort-based student teaching practicum on the formation of their professional teacher identity?	<u>Weeks 9-11</u> : Two TLC Meetings (Qualitative) <u>Week 16</u> : ARP Final Reflection Paper (Qualitative)

Threats to Reliability and Validity

Maturation, defined by Smith and Glass (1987) is a threat that occurs when events that are internal to the research participants may be responsible for differences and changes on the dependent variable. Maturation within this study may have occurred. Participation growth as measured by the TAP Teacher Evaluation Rubric scores and the development of professional teacher identity may have evolved and matured naturally as

a result of being in classrooms with mentors daily and through conferencing with university supervisor. To minimize this threat, the researcher chose to conduct this study within one semester of the student teaching experience, rather than the full year so that the shorter duration may provide less maturation.

The experimenter effect is a threat that occurs when experimenters, by way of their charm and energy toward the study, may motivate their participants and possibly influence the study (Smith and Glass, 1987). Being a highly enthusiastic person by nature and an advocate for success in the iTeachAZ program, the researcher may have been an influence on the participants by being involved in their daily routines and lives outside of the study. To minimize this threat, the researcher collected some of the data anonymously in order to provide opportunities for the participants to be open and honest. To eliminate any personal bias or experimenter influence in the post intervention scoring, the researcher utilized an outside evaluator (IRR) to co-conduct the final teaching performance evaluations.

One additional area of potential threats to reliability in this study included consideration and emphasis on the school district setting where the study occurred. The schools that served as the settings for the participants of the study were known for a high level of support and encouragement, especially for new teachers in the iTeachAZ program at ASU. Many of the mentors working with the participants have previously served as mentors in the program for years and are in close proximity and contact with the researcher on a regular basis. The participant responses may have been influenced by the mentor teachers or former graduates of the program currently working the same school settings.

Conclusion

Chapter 3 provided an overview of the participants, setting, intervention and the methods that were used in the study. These components will be further examined in conjunction with the results and interpretations of the study in the next chapter.

CHAPTER 4

DATA ANALYSIS AND RESULTS

Introducing the Analysis

This study examined the formation of professional teacher identity in senior year elementary education teacher candidates completing their final semester of student teaching. The study included mixed methods data collection with the results presented in the following three sections. The first section includes results from the quantitative data collected using pre and post intervention teacher candidate lesson evaluation scores as the main data source. The second section includes results from the quantitative data collected using pre and post student questionnaire responses. The third and final section presents the results from the qualitative data collected and includes themes and narratives that arose from the Action Research Project (ARP) Teacher Learning Conversations (TLCs) and ARP Final Reflection paper.

This chapter contains the analyses and results of the data collected to answer each of the three research questions guiding the study, which were:

RQ1. How does integrating action research into a cohort-based student teaching practicum improve teacher candidates' teaching practices?

RQ2. How does engaging in the process of action research in a cohort-based student teaching practicum affect teacher candidates' sense of professional teacher identity?

RQ3. How do teacher candidates perceive the impact of an action research project in a cohort-based student teaching practicum on the formation of their professional teacher identity?

Research Question 1 Processes: How does integrating action research into a cohort-based student teaching practicum improve teacher candidates' teaching practices?

This research question was addressed through quantitative data collection measures. Results from the quantitative data are presented in the following section, beginning with the procedures and data collection processes and ending with the presentation of results from the analyses of data.

The quantitative data included a set of pre and post intervention evaluation scores of teaching performances for seven participants. The scores were based on formal lessons delivered by the participants during their final semester of student teaching. Participants created the lessons with the guidance of their mentor teacher, who had previously been trained and supported with integrating the components of the TAP Teacher Evaluation Rubric as a tool for quality teaching instruction. The lessons were evaluated and scored using a one through five rating system assigned to each of seven indicators of the TAP Teacher Evaluation Rubric: Standards and Objectives, Presenting Instructional Content, Activities and Materials, Academic Feedback, Managing Student Behavior, Teacher Content Knowledge and Teacher Knowledge of Students.

The TAP Teacher Evaluation Rubric's one through five scoring system assigns a score of "1" corresponding to an "unsatisfactory" (lack of) amount of evidence from the lesson linked to the descriptors within the indicator, a "3" correlating to a "proficient" (adequate) amount of evidence and a "5" correlating to an "exemplary" (excessive) amount of evidence. Scores of "2" and "4" indicate that the preponderance of evidence was found to be in between the other numbers, with evidence from both categories found equally in the lesson.

The pre intervention lesson evaluation scores were assigned by the researcher during the first month of the student teaching semester. During the in-person lesson observation and evaluation, the researcher observed the pre intervention lesson in its entirety, collected written evidence of what was observed in the lesson and used the documentation to assign TAP Teacher Evaluation Rubric scores to each of the seven indicators. Following the lesson observation and documentation collection, the assigned scores were presented to the participant in a private post conference in-person meeting. Together, the researcher and participant collectively identified one refinement area from the rubric to serve as an area of improvement and growth for future lessons. This refinement area of emphasis for improvement was used as the participants' "Problem of Practice" (area to improve) to guide the Action Research Project (ARP).

The seven participants began their individualized ARP immediately following the identification of their "Problem of Practice." The ARP required that participants used their "Problem of Practice" as a focus for conducting a literature review, completing observations of other teachers and classrooms, participating in Teacher Learning Conversations (TLCs), compiling learning artifact collections and a completing an ARP Final Reflection.

Following the completion of the ARP spanning across the semester, the final (post) intervention lesson evaluations were completed by the researcher and an additional TAP certified evaluator during the final month of the student teaching semester. For the purpose of establishing inter-rater reliability, both evaluators used the TAP Teacher Evaluation Rubric to collect final number score data (one through five) assigned to the participants' teaching performance.

The data collected by the researcher was compiled and shared with students prior to the collection of the data from the IRR. The inter-rater reliability (IRR) evaluator participated in the study to ensure validity of the post evaluation scoring process and the scores themselves. At the time of the evaluation scoring, the IRR held a current ten consecutive-year TAP evaluator certification and was an employee of Arizona State University in the Mary Lou Fulton Teachers College. The IRR evaluator observed the seven participants' lessons in-person, collecting written documentation from the lesson and scoring each one independently of the researcher, with data submitted to the researcher two weeks following the evaluations. The IRR provided a written score for each of the participants in each of the seven TAP indicators and one performance refinement area. This data was used for validity purposes only and was not shared with the participants or as an influence on the final lesson scoring data or feedback provided to the participants.

Research Question 1 Results

Results from the quantitative data collected from the pre and post intervention evaluations of teaching performances for the seven participants are presented in the following two sections. The first section presents the data from the pre and post intervention evaluation scores on the TAP Teacher Evaluation Rubric. The second section presents the data from the pre and post intervention TAP Teacher Evaluation Rubric refinement areas used as the "Problem of Practice" that guided the ARP.

Descriptive statistics from pre and post intervention evaluation scores (both the researcher and the IRR) were calculated using Statistical Package for the Social Science software (SPSS) with the results presented in Table 3. The table presents the seven TAP

Teacher Evaluation Rubric indicators with the mean and standard deviation scores for each indicator.

Table 3

Descriptive Statistics of Pre and Post Intervention Lesson Evaluation Scores

Indicator	Pre Score		Post Score		IRR Post Score	
	M	SD	M	SD	M	SD
Standards and Objectives*	3.28	0.48	3.28	0.48	3.14	0.37
Presenting Instructional Content	3.00	0.81	3.28	0.48	3.00	0.57
Activities and Materials*	2.57	0.78	3.42	0.53	3.42	0.53
Academic Feedback*	2.71	0.75	3.28	0.75	3.00	0.81
Managing Student Behavior	3.28	0.75	3.42	0.78	3.42	0.78
Teacher Content Knowledge	3.00	0.81	3.28	0.48	3.28	0.48
Teacher Knowledge of Students	3.14	0.69	3.42	0.53	3.14	0.37
TOTAL	2.99	0.27	3.33	0.07	3.20	0.17

*Problem of Practice area of focus

Table 3 presents the descriptive statistics of the pre and post intervention lesson evaluation scores compiled by both the researcher and the IRR. The total pre intervention lesson evaluation mean score was 2.99 (SD=0.27), with the two lowest scoring indicators being Activities and Materials (M=2.57, SD=0.78) and Academic Feedback (M=2.71, SD=0.75). The low total standard deviation (SD=0.27) of all indicators indicated that the participants' pre intervention lesson scores were closely centered near the mean score of 2.99.

The ARP intervention was placed between the pre and post intervention evaluation scorings. The post intervention lesson evaluation data was collected after the ARP was completed by all participants. The results yielded a mean total score of 3.33 with a low standard deviation ($SD=0.07$), again indicating that the participants' post intervention lesson evaluation scores were centered very closely near the mean. The IRR evaluator data provided close results for the post intervention lessons with a mean of 3.20 and a low standard deviation ($SD=0.17$). The total data provides that the participants' overall evaluation scores increased from a mean pre intervention score of 2.99 to a mean post intervention score of 3.33 (3.20 from IRR).

Table 3 illustrates that all of the researcher's participants' lesson ratings on the seven scored areas of the TAP evaluator rubric either increased or stayed the same from the pre to the post intervention evaluation scoring. The scores of the IRR are similar with six out of the seven indicators staying the same or increasing from the researcher's pre intervention scores. The IRR's Standards and Objectives indicator decreased slightly from a pre intervention score of $M=3.28$, $SD=0.48$ to a post intervention score of $M=3.14$, $SD=0.37$.

The TAP Teacher Evaluation Rubric does not allow decimals as part of the scoring system, indicating that the IRR's total score of 3.14, even though slightly lower than the pre-score of 3.28, still lies within the 3 category of the scoring rubric. The IRR did not conduct initial scorings (pre intervention) of the participants and therefore, without the pre intervention scores from the IRR, there is no data to indicate if the pre intervention scores for the participants could have been consistent with the researcher. Since the IRR's post intervention evaluation scores were the same or lower than the

researcher's, it is likely that the IRR's pre intervention evaluation scores may have also been similar or lower. This reinforces the evidence that there was growth for the participants on many of the indicators. Additionally, the NIET TAP System Leadership Handbook (2011) provides that if co-scorers are within one rubric number score difference, the results (scores) are considered to be inter-related and consistent.

A significant p value suggests that something nonrandom has occurred (McGough and Faraone, 2009) and that the results are unlikely to have occurred by chance. A paired-samples t -test was conducted to compare the total pre and post intervention scores. The results yielded that there was a significant difference in the scores for the pre intervention ($M= 2.99$, $SD=0.27$) and post intervention ($M=3.33$, $SD=0.07$) conditions; $t(6)=-3.20$, $p=.018$. With a p value less than the significance level of 0.05, the conclusion is that the change in results from the pre intervention to the post intervention evaluation scores may be a result of the intervention itself.

Integration of the ARP into a cohort-based student teaching practicum may have been a factor in the overall improvement of teacher candidates' teaching practices as measured by the TAP Teacher Evaluation Rubric. The qualitative findings reported later in this chapter will offer more insight into the teacher candidates' perceptions of how the ARP actually affected their practice.

Additional quantitative data collection measures of the study also addressed the instructional area in need of improvement, identified as the "Problem of Practice" which guided the ARP. Based on individual participant pre intervention TAP Teacher Evaluation Rubric scores, three instructional areas (indicators) were identified as a refinement "Problem of Practice" focus areas for the participants' ARP. The areas were:

Activities and Materials, Academic Feedback and Standards and Objectives with initial mean scores of 2.57, 2.71 and 3.28 respectively. Four of the participants focused on the Activities and Materials indicator as their “Problem of Practice,” two of the participants focused on Academic Feedback and one participant’s “Problem of Practice” was Standards and Objectives.

Table 4 depicts the three TAP Teacher Evaluation Rubric “Problem of Practice” areas (Activities and Materials, Academic Feedback and Standards and Objectives) used for the participants’ ARP along with the pre, post and post-IRR intervention scores for each of the participants.

Table 4

*Scoring Data of Pre and Post Intervention Areas of Refinement
(Problem of Practice)*

<u>Indicator</u>	<u>Pre Score</u>	<u>Post Score</u>	<u>Post Score IRR</u>
Activities and Materials			
Participant 1	3	4	3
Participant 2	2	3	3
Participant 3	2	3	4
Participant 7	2	3	4
Academic Feedback			
Participant 4	2	3	2
Participant 6	4	5	4
Standards and Objectives			
Participant 5	3	3	3

The researcher's TAP Teacher Evaluation Rubric scores indicate that all of the seven participants' scores in their "Problem of Practice" indicator either increased or stayed the same from the pre intervention score to the post intervention score. The IRR's post intervention scores indicate that all seven participants either increased their score or stayed the same. The mean pre score for all participant "Problem of Practice" areas was $M=2.57$ ($SD=0.78$). The post evaluation score for all participant "Problem of Practice" areas was $M=3.42$ ($SD=0.78$) from the researcher's data and $M=3.28$ ($SD=0.75$) from the IRR, indicating that the ARP intervention did not harm the teacher candidate's performance.

The researcher data indicates that the four participants focusing on the Activities and Materials indicator as their "Problem of Practice" and the two participants in the Academic Feedback "Problem of Practice" focus category made the most growth in data, with all six participants increasing their post intervention evaluation score by one rubric point. The researcher data indicated that the participant's score in the Standards and Objectives indicator "Problem of Practice" area stayed the same from the pre intervention score to the post intervention score.

Based on the data provided, one can assert that integrating action research into a cohort-based teaching practicum may improve teacher candidates' teaching practices, specifically in the area of refinement. Considerations can be made for maturation during the progression of the study as participants were exposed to support from additional sources other than the ARP. Participants were also supported and instructed in the areas of teaching practices and the indicators of the TAP Teacher Evaluation Rubric during class time and by their mentor teacher, administrators and peers. These additional factors

may be responsible for differences and/or changes in the post intervention evaluation data. Because participants were enrolled as full-time students and student teachers for the semester of the study, their growth may have evolved naturally as a result of being in classrooms daily, working with mentor teachers and participating in other coaching and coursework with their university supervisor, also serving as the researcher. Maturation within the full semester student teaching context may have supported the increase of the post evaluation teaching scores for the participants.

Another factor to consider is the potential for bias as the researcher was aware of the “Problem of Practice” and the previous rubric scores achieved by the participants. In an effort to eliminate any unconscious view of improvement based on prior knowledge of the participants’ ability, the researcher did not review previous scores of the participants (from the pre intervention lesson evaluations) and did not review data related to the participants’ “Problem of Practice” areas prior to the in-person lesson evaluations.

During lesson evaluations for all participants, the evaluator collected (in written form) performance documentation, scripting of the lesson and performance evidence, which included detailed notes and quotes of teaching performance and examples from the lesson delivery. These notes were written on the TAP Teacher Evaluation Rubric template and aligned to rubric-specific descriptors in order to provide justification of the score issued for each indicator of the rubric. Per TAP teacher evaluator certification requirements, scores issued using the TAP Teacher Evaluation Rubric may only be issued to the teacher with adequate written evidence to justify and match the descriptor labels for each category. The researcher adhered to this requirement for all of scorings associated with this study.

Research Question 2 Processes: How does engaging in the process of action research in a cohort-based student teaching practicum affect teacher candidates' sense of professional teacher identity?

This research question was addressed through quantitative methods and will be presented in the following section beginning with the procedures and data collection processes and ending with a presentation of the results from the data analyses.

The data collection procedures for the quantitative data included responses from a pre and post experience questionnaire administered to seven participants. The “Teacher Candidate Experience Questionnaire” was created by the researcher for the purpose of this study. The questionnaire used a Likert scale with 12 items comprising four sub-constructs: confidence in self/abilities, sense of teaching/ownership, teaching as a positive career choice and student/teacher/professional identity.

Each sub-construct included three items measuring the participants' views associated with the sub-construct. The items were arranged in random order on the questionnaire and the sub-constructs were not labeled as to not influence participant responses in any way.

The questionnaire was first administered to the seven participants on the first day of student teaching before any portion of the ARP innovation began and the same questionnaire was administered to the seven participants on the last day of student teaching, following completion of all portions of the ARP innovation. The paper-based questionnaire was administered in person after all participants opted-in to the study.

The Likert scale used in the questionnaire included six response categories: Strongly Agree, Agree, Slightly Agree, Slightly Disagree, Disagree, Strongly Disagree.

Participant responses were collected anonymously, and participants were reminded that they could opt out of any of the items or the questionnaire at any time without consequence.

Research Question 2 Results

Results from the quantitative data collected from the pre and post “Teacher Candidate Experience Questionnaire” responses are presented in the following section.

The Likert scale responses were converted into numbers in order to allow statistical data analysis. “Strongly Agree” was assigned a number value of six, “Agree” was assigned a number value of five, “Slightly Agree” was assigned a four, “Slightly Disagree” was assigned a three, “Disagree” was assigned a two and “Strongly Disagree” was assigned a number value of one.

Using SPSS software to calculate the descriptive statistics for the pre and post questionnaire responses, the mean and standard deviation scores for three of the sub-constructs and each individual item are presented in Table 5.

Table 5

Descriptive Statistics for Pre and Post Teacher Candidate Experience Questionnaire Scores: Three Sub-Constructs

Sub-Construct and Items	Pre Score		Post Score	
	M	SD	M	SD
Confidence in Self/Abilities				
I.1. I am confident in my teaching skills	4.28	0.48	5.71	0.48
I.4. I am confident in my ability to problem solve in a classroom.	4.57	0.53	5.71	0.48
I.11. I have the required competencies to be a successful teacher.	4.57	0.78	5.42	0.78
Total	4.47	0.60	5.61	0.58
Sense of Teaching Ownership/Belonging				
I.2. I have my own teaching style.	5.00	0.81	5.71	0.48
I.5. I belong in a classroom.	5.57	0.78	5.42	1.13
I.8. I am a role model for other teachers.	3.42	0.53	4.28	0.75
Total	4.66	1.15	5.13	0.75
Teaching as a Positive Career Choice				
I.3. Teaching is the right career choice for me.	5.28	0.75	5.28	1.11
I.6. I believe that being a teacher means I am successful in life.	4.57	1.51	4.71	1.38
I.9. I have high expectations for my career as A teacher.	5.57	0.78	5.66	0.51
Total	5.14	1.10	5.21	1.01

Supporting research presented in Chapter 2 indicated that participation in personalized learning situations, such as the components included in the ARP, “builds trust and confidence (Timmins, 1994),” which is a facet of building professional teacher identity. Items 1, 4 and 11 on the questionnaire were included in the “Confidence in Self/Abilities” sub-construct with the items: “I am confident in my teaching skills.” “I am confident in my ability to problem solve in a classroom.” and “I have the required competencies to be a successful teacher.” These items were created to measure

participants' confidence in themselves and their abilities before and after the ARP. The items were written to align with research in action research as a positive contributor to human growth and development (Nafstad, 2005).

The data from the first sub-construct indicates that the intervention may have increased the teacher candidates' confidence in themselves and their abilities as part of building their professional teacher identity. This is shown as the mean overall sub-construct score increased from 4.47 (SD=0.60) to 5.61 (SD=0.58).

The second sub-construct, "Sense of Teaching Ownership/Belonging included items 2, 5 and 8, which stated: "I have my own teaching style." "I belong in a classroom." and "I am a role model for other teachers." McNiff and Whitehead (2005) stated that using action research to build professional teacher identity fosters ownership of learning and opportunities for a practitioner to investigate and self-evaluate their work. This sub-construct addresses the ideas involved in feeling a sense of connectedness to their teaching performance and teaching in general. The items in this sub-construct were written to measure these feelings before and after the intervention.

The data from the second sub-construct provides that the intervention may have increased the participants sense of teaching ownership and belonging as part of building professional teacher identity. This is shown by the increase in the mean score of this sub-construct from a pre mean score of 4.66 (SD=1.15) to a post mean score of 5.13 (SD=0.75).

The final sub-construct presented in Table 3 provides data for "Teaching as a Positive Career Choice." As detailed previously, Tiller (1999) stated that when teachers investigate their own practice, they are more satisfied with themselves and their jobs and

that specifically, when student teachers are exposed to a self-evaluative learning process early in their career development, they have more of a likelihood to take personal ownership of their career development. Job satisfaction and a positive career outlook contribute to an increase in professional teacher identity. The “Teaching as a Positive Career Choice” sub-construct presented in Table 3 included items 3, 6 and 9 with the following item statements: “Teaching is right career choice for me.” “I believe that being a teacher means I am successful in life.” and “I have high expectations for my career as a teacher.” These items were created to measure how providing self-organized learning opportunities lead to increased job satisfaction.

The mean data from this sub-construct slightly increased between the pre and post scorings $M=5.14$ to $M=5.21$ with close standard deviations of $SD=1.10$ in the pre score and $SD=1.01$ in the post score. This sub-construct began with the highest mean score over the other two constructs, indicating that the participants may have already had a high confidence level in teaching as a positive career choice prior to the ARP and that the ARP may not have been the only factor that fully contributed to the confidence involved in building the participants’ professional teacher identity in this area. The lack of significant change indicates that the ARP did not harm the participants’ personal views of teaching as a positive career choice.

Table 6 depicts the descriptive statistics for the fourth sub-construct not previously included in the sub-construct analysis presented in Table 5.

Table 6

Descriptive Statistics for Pre and Post Teacher Candidate Experience Questionnaire Scores: Student/Teacher/Professional Identity Sub-Construct

Item	Pre Score		Post Score	
	M	SD	M	SD
I.7. I identify myself as a teacher.	4.57	0.78	5.14	1.06
I.10. I view myself as a professional.	5.42	0.53	5.71	0.48
I.12. I view myself as a student.*	1.28	0.48	2.28	1.11
TOTAL	3.75	2.18	4.37	1.83

*Scores calculated in reverse.

The “Student/Teacher/Professional Identity” sub-construct shown in Table 6 is analyzed separately from the other three sub-constructs because of its specificity in using the words “identify,” “teacher,” “professional,” and “student.” These words are more word-specifically linked to the research question in contrast to the previous three sub-constructs, which were professional teacher identity characteristic categories. The items included in the construct were numbers 7, 10 and 12 and although each item related to the sub-construct, analyzing each item separately provides a deeper understanding of the individual identities rather than combining them for one overall analysis. The items included in this sub-construct are: “I identify myself as a teacher.” “I view myself as a professional.” and “I view myself as a student.”

The results indicate that teacher identity (Item 7) increased after the ARP. Teacher identity increased from a pre mean score of 4.57 to a post mean score of 5.14. The increase in the standard deviation from the pre mean score of SD= 0.78 to the post score of SD=1.06 indicates that responses were slightly more spread around the mean in

the post scoring. The slight increase in the post score teacher identity mean score implies that the ARP intervention may have contributed to the participants' development of professional teacher identity.

The student identity (Item 12) score was calculated in reverse using the Likert scale responses converted into numbers with "Strongly Agree" assigned a number value of one, "Agree" assigned a number value of two, "Slightly Agree" assigned a three, "Slightly Disagree" assigned a four, "Disagree" assigned a five and "Strongly Disagree" assigned a number value of six. This reverse scoring allowed Item 12 to be included in the overall mean of the identity sub-construct in an equivalent scoring manner since a lack of student identity in a post score would indicate a more favorable response, similar to how the increase in the teacher and professional identity responses are viewed as favorable increases in identity.

The student identity sub-construct (Item 12) decreased from a reversed pre mean score of 1.28 to a post mean score of 2.28. The lower standard deviation in the pre score ($SD=0.48$) indicates that the responses were closely centered around the mean while the larger standard deviation in the post score ($SD=1.11$) indicates that the responses were more spread. The increase in the student identity post mean score implies that, with the data reported in reverse, the ARP intervention may have contributed to the participants' decrease in identifying themselves as a student as it increased the participants' identification of themselves as a teacher.

The professional identity item on the questionnaire yielded only a slight increase with a mean pre score of 5.42 ($SD=0.53$) and a mean post score 5.71 ($SD=0.48$). The standard deviations of both sets of data are in close proximity, indicating that the

responses from both the pre and post scores were similar. This implies that the ARP did not profoundly impact the participants' sense of professional identity and that they may have already considered themselves professionals based on their admittance into the student teaching program itself or based on their responsibility to meet the requirements of a professional accountability rubric that begins in their junior year of the program, three semesters prior to the semester when the study occurred.

Table 7 presents a questionnaire response frequency table displaying the response results for each of the items within the sub-construct of "Student/Teacher/Professional Identity." This sub-construct is reported separately of the other sub-constructs because the data from each item relates specifically to identity. The results are based on a six-point Likert scale with a total of seven participants having completed all of the items in this sub-construct of the questionnaire.

Table 7

Questionnaire Response Frequency Percentages: Student/Teacher/Professional Identity Sub-Construct

Item	Strongly Agree	Agree	Slightly Agree	Slightly Disagree	Disagree	Strongly Disagree
I.7						
I identify myself as a teacher.						
Pre Score	14% (n=1)	29% (n=2)	57% (n=4)	0% (n=0)	0% (n=0)	0% (n=0)
Post Score	43% (n=3)	43% (n=3)	0% (n=0)	14% (n=1)	0% (n=0)	0% (n=0)
I10.						
I view myself as a professional.						
Pre Score	43% (n=3)	57% (n=4)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)
Post Score	71% (n=5)	29% (n=2)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)
I12.						
I view myself as a student.						
Pre Score	71% (n=5)	29% (n=2)	0% (n=0)	0% (n=0)	0% (n=0)	0% (n=0)
Post Score	29% (n=2)	29% (n=2)	29% (n=2)	0% (n=0)	14% (n=1)	0% (n=0)

In an analysis of Table 7, there was one participant who responded “Strongly Agree” to the “I identify myself as a teacher.” item with the other six participants spread across the “Agree” and “Slightly Agree” spectrum. There were no responses in the “Slightly Disagree,” “Agree,” “Strongly Disagree” areas. In the post score responses, the “Strongly Agree” responses increased from one to three and the “Agree” responses

increased from two to three, indicating that there was either consistency or change among six of the participants. One participant responded “Slightly Disagree” implying that their post ARP experience did not contribute to their ability to identify themselves as a teacher. The responses were anonymous; however, it is relevant to note that following completion of the post questionnaire, one participant indicated that she had decided to put her teaching career plans on hold and instead, will be pursuing a career in law, beginning the following semester.

The pre score responses to Item 12, “I view myself as a student.” are clustered in the “Strongly Agree” and “Agree” responses for the seven participants. The post score responses indicate a change and are spread equally among the “Strong Agree,” “Agree” and “Slightly Agree,” with two participants responding to each one respectively. One participant responded “Disagree” in the post score, indicating that after completion of the ARP, she did not view herself as a student.

Item 10’s responses to “I view myself as a professional” are in the “Strongly Agree” and “Agree” response categories for the seven participants in both the pre and post scorings. This category can be eliminated as a measurement of the influence of the ARP in this area since the participant responses were already high at the initiation of the study.

Allua and Thompson (2009) stated that a t-test is used to test the statistical significance of the differences in means between two groups of data. In order to understand the relationships between the different sub-constructs of the questionnaire and the change in responses between the pre and post scores, a paired sample t-test was conducted in SPSS using the assigned number system associated with the Likert scale used

in the questionnaire. The t-test statistics showcasing each possible combination of the four sub-constructs is displayed in Table 8.

Table 8

T-Test Statistics for Pre and Post Teacher Candidate Experience Questionnaire Scores

Sub-Constructs	Pre Score		Post Score		t	p
	M	SD	M	SD		
Confidence in Self/Abilities	4.47	0.60	5.61	0.58	6.08	.021
Sense of Teaching Ownership/Belonging	4.66	1.15	5.13	0.75	1.50	.271
Teaching as a Positive Career Choice	5.14	1.10	5.14	1.01	1.87	.200
Student/Teacher/Professional Identity*	3.75	2.18	4.37	1.83	0.97	.930

*Student identity scores calculated in reverse.

The paired sample t-test provides a closer look at each of the sub-constructs' *p* value scores, denoting whether there is enough change in the pre and post scores to say that the change is significant in answering the question. The “Confidence in Self/Abilities” t-test results of pre scores (M=4.47, SD=0.60) and post scores (M=5.61, SD=0.58) conditions; $t(3)=6.08$, $p=.021$ provides enough evidence to indicate that there is a statistically significant difference between the pre and post scores in this sub-construct. With a *p* value of less than 0.05, the conclusion is that the change in results from the pre and post scores may be a result of the intervention.

The “Sense of Teaching Ownership/Belonging” t-test results of the pre scores (M=4.66, SD=1.15) and post scores (M=5.13, SD=0.75) conditions; $t(3)=1.50$, $p=.271$ do not provide enough evidence to assume that the pre and post scores in this sub-construct

are statistically significant. With a p value larger than the alpha cutoff of 0.05, the conclusion is that there is not enough evidence to assume that the pre and post scores in this sub-construct are significant.

The “Teaching as a Positive Career Choice” t-test results of the pre scores ($M=5.14$, $SD=1.10$) and post scores ($M=5.14$, $SD=1.01$) conditions; $t(3)=1.87$, $p=.200$ also do not provide enough evidence to assume that the pre and post scores in this sub-construct are statistically significant. Similar to the previous sub-construct, this sub-construct had a p value larger than the alpha cutoff of 0.05 and therefore, the conclusion is that there is not enough evidence to assume that the pre and post scores in this sub-construct are significant.

The “Student/Teacher/Professional Identity” t-test results were calculated with the scores in reverse and yielded pre scores ($M=3.75$, $SD=2.18$) and post scores ($M=4.37$, $SD=1.83$) conditions; $t(3)=0.97$, $p=.930$. The results do not provide enough evidence to assume that the pre and post scores in this sub-construct are statistically significant. This sub-construct had a p value larger than the alpha cutoff of 0.05 with a conclusion that there is not enough evidence to assume that the pre and post scores in this sub-construct are significant.

Given the small sample size, it is difficult to achieve statistical significance without very large changes in the pre and post data. According to Gabrenya (2003), small sample sizes are notoriously “unstable” and will always be distinctly different due to change (p. 4). Larger sample sizes tend to result in smaller p values and show greater statistical differences (Sedgwick, 2016). With a small sample size of seven participants

and since the scores were already high in the pre score, there was not much room for improvement or change.

Research Question 3 Processes: How do teacher candidates perceive the impact of an action research project in a cohort-based student teaching practicum on the formation of their professional teacher identity?

This research question is addressed through qualitative methods. Processes and results from the qualitative data are presented in the following two sections. The first section includes the procedures and data collection processes used to examine the research question and the second section includes the presentation of results from the data collection.

The data collection procedures for the qualitative data included some of the components of the ARP. The ARP was initiated with the “Problem of Practice,” used to drive the project. The ARP included multiple items that were collected for verification of the project’s progression and completion. The main sources of data from the ARP were narratives and quotes collected from audio recordings and transcriptions of two Teacher Learning Conversations (TLCs) and written quotes collected from the final written ARP reflection papers, which were coded for themes.

The ARP began during the first week of the semester where the participants attended an ARP information session structured to explain the rationale behind using action research and the steps of the ARP that the participants would complete. Following the ARP information session, within the first month of the student teaching semester, the participants created and taught a pre intervention lesson, serving as the data point for identifying the “Problem of Practice” that guided the ARP.

Using their respective area of refinement from the pre intervention lesson scoring as the “Problem of Practice” area needed for improvement, the participants began the ARP intervention immediately following the pre intervention lesson scoring post conference. The goal of the ARP was to use a personalized approach (“Problem of Practice”) to motivate the participants to take ownership of their own growth as teachers and facilitate experiences that would help them gain their identity as a teacher who solves real world problems by utilizing the resources around them in a way that mirrors what in-service teachers do on a regular basis.

The ARP included the following steps: 1. Identification of the Problem of Practice (pre intervention lesson observation), 2. “Problem of Practice” literature review, 3. Observations of other teachers and artifact collection, 4. Participation in two TLCs, 5. Final lesson observation (post intervention) and 6. ARP Final Reflection paper.

The literature review prompted the participants to conduct research in their “Problem of Practice” area as a way to support new learning and growth in the area of need. The participants submitted three or more unique articles related to their “Problem of Practice” goal for improvement. Included with the article collection and submission, participants provided a summary of the new learning acquired from the literature and written details including action steps of how they would apply the new learning in their classrooms and teaching practices. The written submissions were provided to the researcher for verification of participation only.

Following the completion of the literature review, the participants arranged and completed a minimum of three observations of teachers in classrooms outside of their official assigned student teaching placement classroom. The participants were

encouraged to observe same grade level teachers, other grade levels and/or special area subjects either at their home school site or at other school sites of interest. The observations were to be a minimum of an hour at a time up to the full academic day. Participants contacted the prospective teachers they desired to observe on their own and arranged their observation schedules without interfering with current classroom responsibilities and expectations of their mentors and coursework time. All participants documented their observation schedules on an electronic sign-up form two weeks prior to any observations. Participants were encouraged to take notes, collect artifacts, take photos and keep ideas they gained from the observations. Following the observations, participants submitted their observation notes and artifacts to the researcher, which were used solely as verification of participation only.

The participants attended and participated in two TLC meetings (midway through the semester and nearing the end of the semester). The meetings were structured with specific parameters in place to only talk about their experiences and perceptions related to the ARP, however, the conversations were also informally arranged to encourage reflection, sharing of self-awareness and experimentation (Timmons, 1994). The TLCs occurred on required course days so that all participants had the option to participate without missing time in their placement classrooms. At the beginning of each of the TLC meetings, the researcher provided the prompt, “Use this time together to discuss, share your thoughts, ideas and experiences relating to the ARP. You are encouraged to share your experiences during any of the steps in the ARP as part of this conversation.” The facilitator did not participate in the TLCs, other than to answer immediate questions of clarification. The seven participants participated in both of the TLCs and the two sessions

were recorded and transcribed for data collection. The TLC transcripts were coded using open coding to identify and label data that related to the research question. Following the open coding methods, axial coding was used to find connections between the codes in order to identify specific themes and arrange participant quotes into themes.

Following the final week of the semester, after final grades were submitted for all courses and after the completion of all components of the ARP, the participants submitted an ARP Final Reflection paper to the researcher. The participants were presented with the following optional prompts to use if needed to complete the reflection, included in Appendix E:

1. Describe your experience and thoughts related to the ARP you participated in this semester.
2. If there was a step/were any steps in the ARP that impacted you in any way, explain them along with how/why.
3. If there was a step/were any steps in the ARP that did not impact you any way, explain them along with how/why.
4. Provide any additional thoughts or feedback related to the ARP.

Similar to the TLC open coding methods, the reflections were coded to arrange the data into relevant responses. Using the open codes, axial coding was used to identify theme-related components connected to each other so that assertions related to the research question could be made.

Research Question 3 Results

Results of the qualitative data collected from the TLCs and the ARP Final Reflection are presented in the following section in two parts. The first section will

present the data from transcribed quotes collected from the TLCs and the second section will present the data provided in written form on the ARP Final Reflection collected from the participants.

Teacher Learning Conversations

During two TLCs, participants were prompted to share thoughts, ideas and experiences related to the ARP. The first TLC lasted 47 minutes and included seven participants engaged in a conversation with comments only referencing the observations they recently conducted. The participants were encouraged to talk about any component of the ARP, however, all participants shared exclusively about their observations of other teachers with no comments related to any other parts of the ARP. The second TLC lasted 28 minutes with the same seven participants and began with the same prompt statement and structure: to share thoughts, ideas and experiences related to the ARP (paraphrased). Much like the first TLC, in the second TLC, the participants contributed with the conversations exclusively related to the observations component of the ARP. The researcher did not interject nor prompt the conversation to take any particular direction or have a specific outcome.

In the analyses of the qualitative data collected from the two TLCs, 25 unique codes were identified. These codes were grouped into categories and then into theme-related components, which were grouped into five themes to explain the impact the participation in classroom observations had on the participants. The five themes were: (a) diverse situations, (b) engaged and inspired, (c) high expectations, (d) personal connections, (e) disappointment. Table 9 presents the themes, theme-related components and assertions made based on the TLC data collection.

Table 9

Themes, Theme-Related Components, and Assertions from TLCs

Themes	Theme-related Components	Assertions
Diverse Situations	1. Observations in another classroom allowed teacher candidates to see more diversity in student population. 2. Observations in other classrooms allowed teacher candidates to see different teaching styles. 3. Observations in other classrooms allowed teacher candidates to see another teacher evaluation tool in use. 4. Visiting other schools and districts allowed teacher candidates to meet different administrators.	Observations in other classrooms and interactions in other school districts gave teacher candidates the ability to learn from settings they felt were more realistic and diverse, unlike their daily placement classroom and school.
Engaged and Inspired	1. Observations of other teachers allowed teacher candidates to see that they can be similar to someone who is not their assigned mentor. 2. Observations of other teachers that teacher candidates felt were similar to themselves made them feel like they love being in a classroom. 3. Observations of a teacher like themselves made teacher candidates feel engaged in the learning in the classroom.	Observing other teachers inspired teacher candidates to feel more like they can have a different teaching style and feel connected to their initial hopes of wanting to be a teacher.
High Expectations	1. Observations in other classrooms helped teacher candidates notice things going on in the classroom that they never previously noticed. 2. Observing in another classroom helped teacher candidates realize they already have specific teacher skills that didn't know they had. 3. Observing in other classrooms prompted teacher candidates to realize they don't want to be "just the cool teacher" anymore.	Observations in another classroom, away from their mentor, prompted teacher candidates to become aware of their own high expectations for students.

Personal Connections	1. Observing in other schools allowed teacher candidates to learn that they do want to teach specific demographics of students. 2. Observing in other classrooms allowed teacher candidates to connect back to the reasons why they wanted to be a teacher. 3. Observations in other classrooms prompted teacher candidates to see the type of teacher they want to be. 4. Observations of other teachers in their age group prompted teacher candidates to feel connected with their generation in the field.	Observing in other classrooms and grade levels prompted teacher candidates to examine their desires of where they want to teach, their reasons for wanting to be a teacher, what kind of teacher they want to be and how they feel connected to the younger generation of teachers.
Disappointment	1. Observations of other teachers did not always provide a model of what the teacher candidate was hoping to see. 2. Observations in other classrooms made teacher candidates miss their students and own classrooms.	Observations of other teachers did not always provide the exact model, information or experience the teacher candidate desired.

Diverse situations. Assertion 1: *Observations in other classrooms and interactions in other school districts gave teacher candidates the ability to learn from settings they felt were more realistic and diverse, unlike their daily placement classroom and school.*

The following theme-related components were found to be what led participants to this assertion. Observations in other classrooms allowed teacher candidates to see: (a) more diversity in student population, (b) different teaching styles, and (c) another teacher evaluation tool in use. Additionally, visiting other schools and district allowed teacher candidates to (d) meet different administrators.

Participants conducted a minimum of three observations outside their daily placement classroom. The observation locations included school districts in other areas of town and some classrooms in the same school district. Seeing a more diverse population of students was important for Participant 4, who stated that observing in other classrooms showed her that her "... own placement classroom is not very diverse." Participant 6 responded similarly, "We are in a bubble here in (town), it was nice to see what else is out there."

Participants indicated that observing in other classrooms provided exposure to other teaching styles and access to other teacher evaluation tools and administrators. After observing in another district, Participant 3 stated,

We are part of the same classroom every day and I started to take on the same mentality and do the same things (mentor) does without even realizing. It was cool to see other ways to do things and other tools to use, other ways to get kids attention. This got me thinking about how there is not just one set way.

Another participant used the observation opportunity to visit a district where she previously attended school. Participant 6 added,

I went and observed at a high school and it was my freshman algebra teacher and she's actually down at a school that I want to work at. It was nice to go see, like, a school outside of our district, someone outside of our district and a different grade level, just 'cause you get a different perspective on things, whether you think you are going to teach in that district or not 'cause you really get more of a learning experience, I think. It's just like all these little things that it was, it wasn't so much that it was just her teaching, it was more like what rubric their

principals use and how things that are with even the tiniest adjustments like instead of an 'I can' statement objective, it's like a content goal is what it's called.

It was nice seeing high school, because that was what I originally wanted to do.

Participant 2 added that observing in another district and school was helpful in making sense of what she's experienced in being evaluated with a teaching rubric and also preparing for her future career aspirations, "I was able to see the Charlotte Danielson rubric and the similarities between the TAP. I got to meet the school administrator, who gave advice for first year teachers. It was great."

Engaged and Inspired. Assertion 2: *Observing other teachers inspired the teacher candidates to feel more connected to their initial hopes of wanting to be a teacher.*

During the observation protocol introduction and instructions, participants were encouraged to observe teachers who they felt (heard) were similar to them in personality and teaching style and also those of whom they felt (heard) were different from them in personality and teaching style. The following theme-related components were found to be what led participants to the assertion that they felt more connected to their initial hopes of wanting to be a teacher. Observations of other teachers allowed teacher candidates to: (a) to see that they can be similar to someone who is not their assigned mentor, (b) feel that teachers similar to themselves made them feel that they loved being in a classroom, and (c) feel engaged in the learning in the classroom.

Participant 5 shared that she observed a teacher who kept her so engaged that she forgot to take notes because she wanted to watch in the moment and not miss anything

while writing. The participant commented, “She made it so fun for them to learn, her personality was just like mine. I thought to myself, ‘oh my gosh, I love this!’”

Participant 7 indicated that she previously felt she was more preoccupied with what grade level she wanted to teach and that she thought she knew exactly what she wanted but after observing multiple teachers and teaching styles that she felt were similar to her style and personality, she stated, “I used to worry about what grade level I wanted to teach. Now I only care about teaching kids and I want to be someone they all can relate to. I’m just excited to be a teacher. I now realize that I can do this no matter where I am.”

High Expectations. Assertion 3: *Observations in another classroom, away from their mentor, prompted teacher candidates to become aware of their own high expectations for students.*

The following theme-related components were found to be what led participants to this assertion. Observations in other classrooms prompted teacher candidates to: (a) notice things going on in the classroom that they never previously noticed, (b) realize they already have specific teacher skills that didn’t know they had, and (c) realize they don’t want to be “just the cool teacher” anymore.

In addition to participating in observations at other schools, some participants chose to conduct observations in classrooms where other teachers at their placement school were teaching the same students they teach but in different subject area blocks. This occurred mostly in grades with single subject placements such as those that occur in middle school settings. Participant 7 shared that observing her students in another classroom with a different teacher provided her the opportunity to see things that she

knows she would not typically see if she were teaching and standing in front of the students.

I noticed all little things they were doing. I saw one kid just reading a book when he was supposed to be doing something else. I realized that this is probably what (university supervisor) sees when we are teaching. I couldn't believe the teacher didn't see it. The teacher was clueless. I realized that as a teacher, I was not ok with this.

Another participant, Participant 6, observed her students in another classroom working with a different teacher than her mentor and shared that being in this observation prompted her to realize that she already has some teacher attributes that she didn't realize she had. "During my observation time, one student came up to me and asked me if he could go to the restroom...made me realize I already have the teacher look!"

Two participants commented that they have evolved in their ideas of how they thought they would be as a teacher. Both indicated that through their observations in other classrooms, they realized that student behaviors they once thought would be easy to ignore, were actually things they would not be accepting of as a teacher. Participant 4 stated, "Being at another school and seeing a student be disrespectful to her teacher made me realize that I am now a teacher and because of that I wanted to put her in check. I would have if she was my student." In a similar viewpoint, Participant 3 shared,

I used to think, 'I'll be just the cool teacher, whatever, I don't care, they're just kids, I get it' but as I've progressively gotten more into teaching, it's like 'no,' there are some things you just cannot put up with in the classroom...I have evolved a lot in that.

Personal Connections. Assertion 4: *Observing in other classrooms prompted teacher candidates to examine their desires of where they want to teach, their reasons for wanting to be a teacher, what kind of teacher they want to be and how they feel connected to the younger generation of teachers.*

The following theme-related components were found to be what led participants to this assertion. Observations in other schools allowed teacher candidates to learn: (a) that they do want to teach specific demographics of students. Observations in other classrooms levels prompted teacher candidates to: (b) connect back to the reasons why they wanted to be a teacher, (c) see the type of teacher they want to be, and (d) feel connected with their generation in the field.

Some participants chose to visit schools they attended when they were elementary-aged students. The participants reflected that these observations prompted them to feel personal connections from their past experiences and memories to now their current aspirations. The personal connections made during these observations were important to the participants as they provided a context to bridge their own previous experiences as a student with their current experiences as a student and even further now to their newly-developed teacher perspective. Participant 4 shared,

I got the pleasure of seeing my own elementary school. I got to see a self-contained classroom for ELLs whose first language is Spanish. I got to see things that I want to do and that I don't want to. She was a great teacher; a friend to them outside the classroom. In the classroom, she was a teacher. She sheltered them a little, was more protective. Rather than letting kids take on more responsibility, she did things for them that I know they could have done. I saw

myself in her, but I know she was very different from my mentor. She (my mentor) lets students have more responsibility so comparing the two and with me being a second language learner, I know I will be a different teacher.

Participant 2 also visited her previous school from childhood, sharing,

I went back to my old elementary school, which is completely different from what it used to be. I observed a teacher who told me she wanted to teach older kids but ended up in third grade and wants to make an impact earlier. I want to be like that there.

Participant 2 added that her observation in a classroom where she previously attended school prompted her to connect back to when she was younger. She stated,

I found myself connecting a lot to when I was a student. While I was observing, I kept asking myself, 'Did I do this when I was in fifth grade?' This reminded me why I originally wanted to be a teacher.

Participant 1 stated that observations in classrooms helped her discover what type of teacher she wants to be and that her personality and expectations of herself are normal, sharing,

Throughout my time in a fourth grade classroom observing, I realized that we are so similar. I found someone I completely agree with, even with word choice. I saw someone like me who builds relationships and put ownership on students. It felt so age-appropriate, so welcoming and inviting.

Some participants found that while observing in other classrooms, they enjoyed being a part of the younger group of teachers and that observing teachers from their own generation helped them feel more personally connected.

Participant 5 shared that observing a teacher with a more youthful approach helped her realize that even though she appreciates her mentor's style, she appreciated the way she felt when she connected with another teacher while observing, stating,

I was thinking in my head, 'oh my gosh, I am so much like her in the way that I keep on going with directions and the way she presents her lessons.' Inside my brain, I'm like (my mentor) but in real life I'm not like her at all. I have a different type of humor. I saw this in (the teacher).

The same participant also shared that her observation of another teacher was the opposite. She shared,

Our personalities are so different. She's like a big inflated balloon flying around and I'm like a little bitty small uninflated balloon. But, I loved it so much. What I connected with was, yes, she has the ability to be funny with them, make them laugh and have them joke with her but she has a strict side too. I have the ability to do that too. The similarities between us were on two different spectrums of personality but I could see myself being more like her in my own classroom if I was on my own.

Some of the participants observed a teacher who was a previous teacher candidate in the same student teaching program they are all completing, three years prior. This young teacher was recently hired in the district where the teacher candidates are placed for their student teaching. Of the participants who observed this teacher, each participant commented that they felt comfortable in his classroom. One participant shared of her observation of this teacher,

I feel like I can joke with my students like him. I know that I know more about

my students' lives than my mentor teacher because I just talk to them. Being a part of the young crowd helps the students feel like we are more a part of their community. It was obvious that the students in this classroom felt they could trust him and that's the kind of teacher I feel like I am.

Disappointment. Assertion 5: *Observations of other teachers did not always provide the exact model, information or experience the teacher candidate desired.*

The following theme-related components were found to be what led participants to this assertion of disappointment. Observations of other teachers (a) did not always provide a model of what the teacher candidate was hoping to see and observations in other classrooms (b) made teacher candidates miss their students and own classrooms.

Participants conducted a minimum of three observations outside their daily placement classroom and were able expected to observe for ideas related to their "Problem of Practice." Prior to the observations, participants did not tell the teachers they were observing that they were there to identify specific strategies or learn any exact structures from them. Following the observations, one of the participants expressed disappointment that she, "...specifically heard the teacher saying things that we were not allowed to say." and another participant stated that, "...it was a fun visit, but I didn't see her do anything at all that I was looking for."

Two additional participants commented similar ideas relating to their disappointment in that they enjoyed the observations but were watching the time, "...wondering what my students were doing." and "...thinking of what I would be doing with my students if I was in my own classroom." Participant 2 stated of her observations at another school: "It made me miss my own students and I felt bad leaving them. The

whole time I was observing, I was thinking of my students and what I was missing with them in the classroom during that time.”

Based on the narratives collected from the TLCs, one can assert that the classroom observations component of the ARP contributed the most to the formation of the participants professional teacher identity by fostering opportunities for the participants to connect with diverse situations, prompting participants to feel engaged and inspired, allowing the participants to find their own high expectations for teaching and learning and prompting opportunities for the participants to make personal connections. Additionally, data from the TLCs provided that the classroom observations component of the ARP also included some levels of disappointment, which additionally contributed to the participants’ experience of growth in developing professional teacher identity as this allowed them to gain insights from more critical viewpoints.

ARP Final Reflection

Participants submitted responses to prompts related to their experiences and personal conclusions from the ARP as a whole. The seven participants submitted written responses to the prompts following the completion of all components of the ARP.

In the analyses of the qualitative data collected from the ARP Final Reflection responses, the written statements from the participants were coded using open coding to identify themes for each prompt. Using an open coding approach, quotes that included themes related to the prompt were collected and assertions were made relating to the initial research question. The data is presented in the following sections.

Data analyses from The ARP Final Reflection Paper provided that observations in other classrooms was one of the main contributors in building professional teacher

identity, similar to the data collected from the TLCs presented in the previous section. In contrast to the data collected in the TLCs, however, the ARP Final Reflection responses provided additional data to examine other areas of the ARP as possible contributors to building professional teacher identity. The following sections provide each prompt, the related participant quotes, and assertions that can be made from the data collection.

Prompt 1: Describe your experience and thoughts related to the ARP you participated in this semester.

Participants provided written responses to this prompt that indicated a favorable experience for many of them. Responses indicated that participants found the ARP to be helpful, productive, and worthy of doing again in the future with one participant stating, “Overall, my experience was great, and I would do it all over again.”

Additional participants indicated that the ARP prompted them to become more reflective, aware of their own skill set and more of a critical thinker. Table 10 presents the quotes collected in response to the Prompt 1, addressing the overall ARP experience, along with the assertions that were made based on the participant responses.

Table 10

ARP Final Reflection Prompt 1 Quotes and Assertions

Prompt 1	Participant Quotes	Assertions
Describe your experience and thoughts related to the ARP you participated in this semester.	“Participating in this action research helped me reflect on my problem of practice and my teaching methods more accurately. It made me try new things and in result, it went really well.” “I do believe the biggest impact I got from ARP, is being able to modify my teaching skills. I was able to improve in the area I was having trouble on, which I notice it brought out my creative side. It also made me be a better problem solver for my student needs as well as be able to more of a critical thinker.” “I found this to be very helpful in discovering to really analyze my own strengths and weaknesses.” “Throughout this process, I have grown immensely. By being able to pick something that I see is an area of struggle and pinpoint on that problem of practice has allowed me to take accountability and ownership in my teaching career. It was helpful to select something of my own, rather than being told what it is and no agreeing with it but doing it anyway because I felt like I had to.” “I think having a problem of practice really helped me reflect on my own teaching and made me challenge myself to try new things.”	Teacher candidates found the ARP to be a challenging and reflective process that encouraged opportunities for them to try new things, be a more creative problem solver and critical thinker while also fostering the ability to learn in a personalized way.

Based on the participant quotes provided in Table 10, one can assert that teacher candidates found the ARP to be a challenging and reflective process that encouraged opportunities for them to try new things, be a more creative problem solver and critical thinker. The ARP also fostered the ability to learn in a personalized way as the participants added that they were able to analyze their own strengths and weaknesses. Multiple participants highlighted the ARP as helpful and promotive of personal growth and improvement in teaching, while one participant indicated that the independent side of the project allowed her to take more ownership of her career.

Prompt 2: If there was a step/were any steps in the ARP that impacted you in any way, explain them along with how/why.

Participants responded in writing to this prompt, which provided data to indicate if there were any components of the ARP that were impactful and if so, how these components impacted the participant.

Responses indicated that the majority of participants found the observations to be the most impactful component of the ARP, with five of the participant responses emphasizing this step as the most favorable. One participant added that the TLCs was the most impactful step and one participant credited the literature review as providing her with the biggest impact.

Table 11 presents the quotes collected in relation to Prompt 2, addressing the areas of positive impact from the ARP experience, along with the assertions that were made based on the participant responses.

Table 11

ARP Final Reflection Prompt 2 Quotes and Assertions

Prompt 2	Participant Quotes	Assertions
If there was a step/were any steps in the ARP that impacted you in any way, explain them along with how/why.	“Observing allowed me to see other grade levels and teaching styles. I was able to find similarities in their methods and also gain a plethora of classroom management tools. I enjoyed being a guest in someone else’s classroom and being able to be a fly on the wall.” “Observing other teachers was helpful to me but just on my future teaching practices in general. Observing teachers who didn’t incorporate my problem of practice did not help me grow in that area.” “I believe the observations definitely created the biggest impact on me. This is because I not only focused on looking at a similar setting but went to different grade levels and districts. This allowed for more data to be collected on my Problem of Practice along with any other ideas I found to be helpful for my future as an educator.” “The observations of other educators allowed me to see how other educators use different checks for understanding with their students and how I could possibly incorporate those types of checks into my lessons. This helped me not only think of the ‘how’ and the ‘why’ of being a teacher but also the ‘what’ and the ‘when.’” “I found the observations I completed very helpful. I was enjoyable to see other teachers in their own classrooms interacting with students in a different way than I would or how my mentor	The majority of teacher candidates found the observation component of the ARP to have the most positive impact with fewer teacher candidates finding the TLCs and literature review as most impactful.

does. You never really know how a person teaches until you get to watch them personally. Being in other classrooms forced me to see that I need more tools in teaching but that it is ok for me to be who I am in the classroom and not my mentor.”

“The best experience I can say is when we would have the TLC. I really enjoy hearing the experiences the other participants had to share as well as mines. The best part is being able to expose ourselves to different techniques that will make us stronger teachers.”

“The literacy review had the biggest impact on me because I was able to learn new methods about how to check for understanding. I was able to take the exact steps and recommendations from the articles I read and apply them to my teaching.”

The participant quotes provided in Table 11 assert that the majority of participants found the observation component of the ARP to have the most positive impact on them personally. Two additional areas of positive impact included the TLCs and the literature review with one participant each indicating these areas as a positive experience for them personally.

Based on the written narratives provided, five participants found the observations to be helpful in providing ideas and guidance for future teaching skills and personal connections. Multiple participants made connections from the observations to their gains in learning tools and strategies for future practice in addition to the value they found in seeing other grade levels and districts. One participant indicated that observations helped

her see that her individual style in the classroom, although different from her mentor, has value.

One participant's response that TLCs were the most impactful included a reference to the TLCs being a positive experience in sharing and learning from others. This participant stated the opportunity for exposure to other participants' experiences and techniques was enjoyable.

A final participant indicated that the literature review was the most impactful, with the justification that the literature she found guided her own instructional improvement and helped with how to take exact steps for what she needed to change. This participant found new methods for her own teaching improvement and was eager to apply the new learning right away.

Prompt 3: If there was a step/were any steps in the ARP that did not impact you any way, explain them along with how/why.

Three of the seven participants provided written responses to this prompt, indicating which of the components of the ARP had the least impact on them. Table 12 presents the participant quotes and assertions that can be made from the Prompt 3 data collection.

Table 12

ARP Final Reflection Prompt 3 Quotes and Assertions

Prompt 3	Participant Quotes	Assertions
If there was a step/were any steps in the ARP that did not impact you any way, explain them along with how/why.	“I would say the least impact part were the TLCs we did in class. Although I did enjoy listening to everyone’s stories, it just seemed like we were all forcing stuff out to say, and it wasn’t like a nature conversation as we usually have. I don’t know if it was because there was a recorder or what.” “Unfortunately, I really didn’t enjoy most of the TLCs. It was nice to hear about other people’s areas of focus but it didn’t help me with mine since my problem of practice was different from theirs.” “To me, the literacy research had the least impact on me, only because everything that I read and found told me the same information with small changes here and there but nothing majorly different between the article I read.”	Some of the teacher candidates found the TLC component of the ARP to be the least impactful, while one teacher candidate found the literature review to have the least impact.

The responses provided that two participants found the TLCs to be the least helpful, citing that the conversations felt “forced” and may have been impacted by the recorder present during the conversations. Another participant wrote that the TLCs had the least impact, stating that the differences in interests and areas of focus between the participants was not helpful.

One participant indicated that the literature review was the least impactful step in the ARP, mostly because the information she found was redundant and not unique in supporting her specific area of need.

Prompt 4: Provide any additional thoughts or feedback related to the ARP.

All seven participants responded to this prompt with narratives that indicated a positive experience related to their participation in the ARP. Similar to the responses to Prompt 1, the participants indicated that the ARP encouraged them to reflect, discover new insights and grow as more independent thinking teachers.

One participant added,

I enjoyed every step of the ARP. I felt it was logically sequenced, with each step correlating to the next. I flourish when given open-ended tasks like this and I felt successful with it. This project made me aware of my area of improvement and allowed me to take action.

Additional participants also contributed to the favorable responses with one stating, “I believe that the ARP was true to its purpose in improving teaching practices because I discovered many new ideas. When focusing on only one thing at a time, it becomes easier to learn how to grow in your PoP.”

Other participants included that their experiences with the ARP prompted them to consider using their own ARP techniques and approaches as teachers in the future. One participant wrote

I definitely think participating in this ARP improved my teaching practices. I myself can be an introvert when it comes to presenting and being around a new group of people. Doing this pushed me to try new things, not be afraid to fail

when I do and when I do make a mistake, I know that its ok to mistakes and that we learn from them, which is a great skill to teach students. Participating in this research taught me a valuable lesson. I know that in the future if ever encounter a problem or if I am struggling teaching or with behavior in my future classroom, I know how to solve this or find a solution based on the research. Thanks to participating in this research I know what resources to look for to better my teaching practices.

Another participant added that the ARP contributed to her increased intrinsic motivation and that she intends to use ARP strategies in their future practices. She stated,

This project has helped me grow so much. It takes a lot to get people intrinsically motivated but having guidelines and steps to follow made it easier for me to want to learn and implement new teaching strategies. I now feel like I can do this in the future, each time I have a problem in my teaching, I know can count on being able to observe other teachers, reading literature pertaining to it and working with direct supervisors to give me useful feedback.

Two participants added that the ARP was a positive experience in a way that added value outside of what a traditional learning experience in student teaching would include. One participant emphasized that the ARP was more meaningful than traditional classroom assignments as she wrote,

The ARP pushed me in ways that the average class assignment wouldn't. It felt more meaningful considering it was my own personal area that I wanted to improve on. This semester was by far my favorite because of this. I learned so much on what the first days of school should look like and how to really create a

successful classroom environment full of community. I found my own teaching style here, I know what kind of teacher I want to be and how I can reach all children.

A final participant also added that the value of the ARP was beyond the traditional means of student teaching assignments and that the cohort collaborative model of participating in the project together added a positive element to the personalized learning experience. The participant wrote,

Throughout this year, especially this semester, I felt a sense of comrade amongst the cohort. Each teacher candidate was transparent in their feelings and willing to collaborate with others. We encouraged and supported each other during exciting and challenging days. Our communication was honest and embodied our group teamwork.

Though all participants responded with positive experiences in response to Prompt 4's request for additional thoughts, one participant responded to the opportunity to provide feedback as requested in the second component of the prompt. The participant added that it would have been helpful for the researcher to arrange the participants in similar-needs ("Problem of Practice") groups so that they could have worked together more closely. The participant wrote, "My only suggestion is if I were to go through this process again, I think a good idea would be to pair people with the same PoP so they can discuss their findings together and learn from each other on stuff that relates to them both."

In response to this participant, because the study took place in an educational setting, with the participants also being students under the guidance of the researcher as

their evaluator and grader, student grading and specific data related to student achievement was not shared with the participants. The Family Educational Rights and Privacy Act (FERPA) does not permit educational leaders (teachers, professors, education administrators) to share personal student information and/or grading information between students. Arranging students in similar grouping structures based on areas of need and achievement would have been in violation of FERPA, therefore, the researcher did not promote sharing of personal scores or data related to the “Problem of Practice.” If any of this information was shared, it was on the participants own accord and not confirmed or corrected in any way by the researcher.

Conclusion

This chapter presented the mixed methods processes and data collected as part of the study to examine the formation of professional teacher identity in senior year elementary education teacher candidates completing their final semester of student teaching. Descriptive statistics of the quantitative data provided that integrating action research by way of an intervention called the Action Research Project (ARP) may have improved teacher candidate’s teaching practices as measured by the TAP Teacher Evaluation Rubric. Additional quantitative data collected from a “Teacher Candidate Experience Questionnaire” indicated that engaging in the process of action research in a cohort-based student teaching practicum may have affected teacher candidates’ sense of professional teacher identity.

Qualitative data collected through Teacher Learning Conversations (TLCs) produced five themes summarizing how observations in other classrooms impacted the teacher candidates as they felt: (a) diverse situations, (b) engaged and inspired, (c) high

expectations, (d) personal connections, (e) disappointment. Narratives coded from ARP Final Reflection produced three assertions related to their overall experience with the ARP: (a) Teacher candidates found the ARP to be a challenging and reflective process that encouraged opportunities for them to try new things, be a more creative problem solver and critical thinker while also fostering the ability to learn in a personalized way. (b) The majority of teacher candidates found the observation component of the ARP to have the most positive impact with fewer teacher candidates finding the TLCs and literature review as most impactful. (c) Some of the teacher candidates found the TLC component of the ARP to be the least impactful, while one teacher candidate found the literature review to have the least impact. In final written reflective comments, the seven participants of the study provided that they perceived the ARP as a favorable experience where they felt they evolved as teachers. In the next chapter, discussion, interpretation and personal lessons learned will be presented.

CHAPTER 5

DISCUSSION

The initial problem driving this action research study was the lack of opportunities for students in teacher preparation programs to experience personalized learning that mirrors what in-service teachers do authentically in their classrooms. An opportunity for preservice teachers to conduct action research was used as an intervention to promote an experience where teacher candidates were able to focus on their growth as a whole person. The goal of the study was to build professional teacher identity for preservice teachers who were eager to become the professional they had always dreamed of being. An intervention called the Action Research Project (ARP) was implemented into the final semester of a student teaching practicum in an effort to increase teacher effectiveness while building professional teacher identity.

The emphasis of the study was to integrate a personalized learning experience that would promote alignment of personal goals with program expectations in order to build ownership, agreement and compatibility with the results of their preservice teaching experience (Sexton, 2008). With this in place, the study intended to build teachers out of students.

This study was designed to examine how integration of the ARP improved teaching practices, how it affected professional teacher identity development and what specific components contributed to this development the most. The following sections summarize the study's data complementarity, results in relation to extant literature or theories and discussions of personal lessons learned, imitations, implications and closing thoughts.

Discussion of the Complementarity of the Quantitative and Qualitative Data

For this research study, a mixed methods approach for data collection and reporting was used. Complementarity between quantitative and qualitative data includes elaborating and illustrating relationships between each type of data in a way that complements the other (Greene, 2007).

Results from this study reveal some complementarity in building professional teacher identity through multiple methods. First, the qualitative data provided that teacher candidates perceived their participation in the ARP as positive, citing that observing in other classrooms was the most impactful contributor. The quantitative results of the “Teacher Candidate Experience Questionnaire” indicated that there was an overall increase in teacher identity and a decrease in student identity, which indicates that the intervention, including the observations in other classrooms, may have contributed to the change in attitudes and beliefs. Ultimately, the goal of any teacher is to continually grow in their own pedagogical skills as a result of self-reflection and ongoing application of learning from professional development. The quantitative data collected from the formal teacher lesson evaluations indicated that one or more of the components of the ARP as a potential professional development-like tool, may have increased their teaching performances.

Qualitative and quantitative data also cross-validated a finding pertaining to beliefs between the questionnaire and the narratives provided in the TLCs. In the statistical data collected, the questionnaire indicated that over the course of the ARP intervention there was the most increase in confidence in self and abilities, with this sub-construct having the largest increase aside from the identity sub-construct. Narratives

collected from the TLCs included quotes that participation in observations, as part of the ARP intervention, provided a deeper look into how the teacher candidates evolved into feeling more engaged, inspired and having higher expectations than they did before their participation.

The quantitative data analyses of the results from the “Teacher Candidate Experience Questionnaire” showed a lack of significance in most of the sub-constructs. However, while the survey data did not provide significant changes in most of the variables, the qualitative data was able to provide a different perspective on the value of the ARP. Quantitative data from the questionnaire indicated that there was no significance in the sub-constructs: “Confidence in Self/Abilities,” “Sense of Teaching Ownership/Belonging,” and “Teaching as a Positive Career Choice,” yet the qualitative data from the narratives collected in the TLCs and the ARP Final Reflections indicated that participants felt encouraged, positive and that the ARP was an asset to their future careers as teachers. In their narratives on both data sets, many participants contributed that they were eager to use action research in their future classrooms and explore it more in depth as an approach to solve problems they may encounter in their classrooms in the future.

Discussion of Results in Relation to the Extant Literature or Theories

Friesen and Besley (2013) argued that teacher educators need to be cognizant of the profound impact that teacher preparation programs can have on identity development. Additional research in this area also suggests that if teacher prep programs want the most effective results from their work with newly forming teachers, professors should include opportunities for them to connect their new learning to their own beliefs, vision and

identity (Meijer, Korthagen and Vasalos, 2009). These connections cannot just be momentary but must be deeper and more personalized in a way that aligns with an individual's personal mission and goals (Korthagen, 2004).

The foundation of this research study was built upon initial considerations and principles of adult learning theory, which led to a closer look of what ultimately could contribute to the success of a traditional college-aged student. By examining the dimensions of action research as a way to solve problems, promote more reflective practices and encourage growth as a professional, the notion of personalized learning while improving practice is an obvious way to build professional identity. When done with fidelity, the use of action research in an educational setting can be an exceptional way to build professional teacher identity.

The Theory of Self-Organized Learning was used by the researcher as a framework to create some of the unique components and steps the participants completed as part of the intervention. Foundations used from this theory prompted participants to leverage their own intrinsic motivation to improve as professionals. Harri-Augstein and Thomas' (2014) ideas regarding the importance of "learning to learn" played an important role in driving the self-driven and reflective components of the study. This meant that if the participants were to leave their identities as students behind and transform into a new identity as a teacher, they needed to learn what it really meant to be a self-organized professional and be able to experiment with their new learning in flexible and socially supportive settings. Experimentation with the learning process as an adult can be a vulnerable and emotionally difficult process. Because of this, it is essential

to foster opportunities where teacher-learners can experiment in a safe and supportive environment. The ARP provided this structure.

Research providing data of action research methods used in teacher education programs is very limited. One compelling example, presented in Chapter 2, included a study conducted at the University of Wisconsin-Madison. The study presented the integration of action research into students' fifth semester, during the final year of their teacher prep program. The teacher preparation department emphasized three purposes in their vision for using action research during the final semester for their preservice teachers: a) to research one's own practice and situation, b) to be collaborative, and c) to be emancipatory and democratic. Researchers at the University of Wisconsin-Madison found that the term "emancipatory" was a theme of importance derived from the data collected in the study and that the integration of action research promoted reflective practices indicative of those that can transfer to future career practices following the practicum (Gore and Zeichner, 1995, p. 123).

While the data collected from the participants in the ARP intervention study conducted at ASU may not have fully indicated that all participants favored all components of the ARP equally, many participants provided narratives that linked their experiences from ARP to their intent to use the new learning in their own classrooms and in other future endeavors. Merriam-Webster (2019) defines the word emancipate as "to free from restraint, control, or the power of another." Much like the study conducted at the University of Wisconsin-Madison, the participants of this study at ASU, after completing their own action research, became more independent and self-aware. If action research in teacher prep allows teacher candidates to feel that they are free of the

power or control previously bestowed upon them as students, they have earned their titles as teachers.

In another study also mentioned in Chapter 3, a university in Southern California integrated action research into their teacher education and certification program. The goal of this integration was to measure perceptions and preparedness for teaching. The data collected in this study indicated that the participants perceived themselves as more reflective practitioners and also felt more connected to student learning outcomes and achievement following their integration of action research methods in their classrooms (Lattimer, 2012).

The themes that emerged from the Teacher Learning Conversations (TLCs) included how observing in other classrooms as part of the ARP prompted participants to reflect on different areas that were not previously discussed in detail as part of their student teaching experience. Participants reflected that they were able to find more diversity, feel engaged and inspired, make personal connections and feel disappointment in not seeing what they wanted from others. One additional theme that emerged in the data collected from the Teacher Learning Conversations was that participants acknowledged that observing in other classrooms helped them recognize their high expectations for themselves and for their students. Similar to the study conducted at a university in Southern California, the participants who completed the ARP also felt more connected to the learning outcomes of their students in addition to the role they played in the positive achievement growth of their students.

Integration of action research into earlier semesters of teacher prep programs should be considered. When teacher candidates are in the early stages of finding their

own interests in teaching, action research can be used build feelings of wholeness and fulfillment in teaching, which increases job satisfaction and retention (Korthagen, 2004). Action research gives a more realistic view of teaching that if implemented and researched earlier in teacher prep programs, could eliminate misinterpretations of what teaching is like and instead provide a more hands-on approach where students feel that their personal mission for becoming a teacher is aligned with their identity (Korthagen and Vasalos, 2008).

Discussion of Lessons Learned about Implementation of the Action

The data collection methods used in this study were specific and as in quality data collection, there was no room for personal “off the record” experiences to be included with the reporting of results. What was not reported in Chapter 4 was the gratitude expressed casually by the participants as a result of their opportunity to be a part of the unique ARP experience. On frequent occasions, participants openly shared how they appreciated the exposure to action research, with it being something new they had never experienced. Some participants in the study were aware that teacher candidates in other cohorts of their same ASU iTeachAZ program were not using action research in their final semester of student teaching and because of this, the participants felt they had an extra advantage. Some participants felt that their experience with action research and this study would serve as an asset to them in the future as they were eager to list their participation in this study on their resumes. One teacher candidate shared candidly that she felt her participation in this study helped her to feel like more of a leader among her teacher candidate friends who were working in other cohorts.

Though the participants did not unanimously indicate that they all favored the TLCs, they did provide, through the narratives, that these social situations contributed to their ability to see themselves as individuals within a group of others who are sharing the same vision. The transformation from student to teacher was evident in their narratives, which highlighted their intent to make connections for future implementation and also in their desires to advocate for the best settings and approaches for kids. One consideration for exploring more of the value in using TLCs to professional teacher identity may include a more informal setting, where the participants are not being recorded and can feel less monitored as they share.

Van Maanen and Barley (1984) indicated that ownership of professional identity means ownership of a specific set of attributes and self-awareness that includes unique, skilled and/or scarce abilities that indicate belongingness to a particular organization. Through the components of the ARP, the teacher candidates worked to improve their own teaching evaluation scores and ultimately shared what was important and not important to them within their small group setting, all while keeping their responsibility to children as the main priority. This dedication is indicative of a professional teacher.

Discussion of the Limitations

The study took place during the second of two semesters of student teaching. The participants of the study were together as a cohort during the first semester, with coursework exclusively taught by the researcher. The first semester of student teaching included exclusive work with a mentor teacher, along with four associated senior level courses. During the second and final semester, when the study was implemented, the participants had a significantly lighter course load and were able to spend more time in

their placement student teaching classrooms. This decrease in responsibilities outside the classroom may have led to a happier demeanor, which may have affected the attitudes of the participants as they participated in the ARP. The cohort of participants were a close group with supportive mentors, administrators and each other. The participants frequently met outside of school to work on assignments together and discuss ideas for lessons and activities to implement in their classrooms. Some of the participants were roommates and carpooled on a daily basis. These favorable opportunities and interactions may have contributed to a more positive outlook on their roles in the study.

In a study conducted by Capobianco and Ríordáin (2015), preservice elementary teacher who engaged in action research at the National University of Ireland shared that their biggest limitations with completing action research were mostly with the uncertainty of their own ability to fulfill the demands of “doing a good job on the project” (p. 11). Similar to this study’s results, a possible limitation may have been that because of the close, jovial relationship the participants had with the researcher and the small sample size of participants in the group, they may have felt obligated to produce responses they felt the researcher would have expected of them as professionals.

A final limitation of the study was the inability to share participant results and “Problem of Practice” categories amongst the group without violating FERPA. If FERPA had not been a concern, participants could have been grouped in study groups with similar needs, where they could have shared ideas, provided recommendations and/or voiced concerns related to their “Problem of Practice.” Without FERPA as an obligation, participants could have also been matched with other participants (cohort-mates) who have strengths in the area. This could have produced more robust

opportunities for collaboration and support within the group and may have also led to more effectively interpreted TLCs.

Discussion of Implications for Practice and Research

The results from this study supports a large body of research that includes how action research can be used to promote teaching improvement and personal growth in education. Specifically, this action research study adds value to the body of research related to preservice teacher preparation programs on a continued quest to increase student enrollment, retention and overall student success.

A consideration should be made for future research in the area of using action research as a way to build teaching skills and professional teacher identity in teacher prep. An idea could be a compare and contrast between a cohort of students integrating action research into their final semester of student teaching and a cohort that is not.

School districts across the nation are continually looking to retain teachers and promote hiring practices. School district human resource departments are especially looking to hire teachers that are well-rounded practitioners who have an elevated sense of professionalism rooted in experiences that have led to student achievement. Knowledge of action research, what it is, how it contributes to teacher efficacy, and ultimately how it is what's best for kids can be an asset during the hiring process.

Since the implementation of this study, the school district setting where the study took place has begun a new approach for learning for all elementary students in all schools. "Personalized Learning" is an approach that "builds a strong classroom culture in which learning targets are transparent, environments are flexible, and instruction is tailored to meet each student where they are (Forbus, 2018)." This approach is a mirror

image of what the participants of this study encountered. If personalized learning is the highest level of differentiation for elementary students, action research is the ultimate differentiation for teaching professionals. The participants of this study can now take back their experiences as action researchers to parallel what their students are accomplishing. The research derived from this study can also add to the justification of personalized learning as a way to build culture and meet individual learning goals, as it did for the participants in this study.

Personal Lessons Learned

Prior to my work as a researcher implementing this study, my understandings of how teaching and learning occurred in higher education were somewhat limited to what could be measured by a pre-packaged rubric or other course-related assessments and assignments. I have spent many years recycling assignments from previous instructors because “they just worked.” Having worked in the field of education for 18 years with eight of those years spent working in higher education, I have always had a passion for the blend of independence and collaboration that being a teacher provides, but I’d never really fully jumped in and tried it without hesitation.

Prior to this semester of research, I have previously worked with six other cohorts of teacher candidates completing their full year of student teaching. Each cohort had their own personalities and group dynamics, but the cohort that participated in this study had a different dynamic while participating in this study. Their conversations before and after class were about teaching and ways to improve. They were more detailed and mindful, with examples and situations that were much more complex than the average student. The questions emailed to me were not asking for assignment extensions or

excuses, they were unique questions related to what works best for students, for becoming a better teacher and how to obtain specific personal teaching goals. It was easy for me to see that this change in group dynamic was a result of their participation in this study.

I created this study based on previous cycles of research where many of the teacher candidates were visibly sad or depressed to graduate after completing the program because they didn't want to "have to grow up" or "didn't know what to do" after graduation. Many teacher candidates in cohorts I supervised in the past also mentioned that they "just want to graduate" or "just need to get to the finish line." These comments were what prompted my quest to further explore preservice teacher emotions as a priority.

Additional data collected from previous cycles of research indicated that teacher candidates felt that their mentors were a huge influence on them positively but that sometimes, the mentor's style and personality did not always agree with their own. I used this insight to provide the observation component to the ARP. With this component emerging as the biggest contributor to the teacher candidates' development, I was reassured that preservice teachers need diverse experiences and opportunities in order to find themselves and that spending all of their time with one mentor was not completely beneficial.

As I collected data and arrived at the themes and assertions from what the teacher candidates experienced in the observations portion of the ARP, I frequently related my new insights from this study to Whitaker's (2015) book, *What Great Teachers Do Differently*, where in the first chapter, Whitaker explains the importance of studying

greatness. There is merit in surrounding ourselves with others who challenge us, are better than us and inspire us. The teacher candidates experienced this within their own cohort and with the observations they conducted.

Closing Thoughts

Trends in education come and go but the need for high-quality teachers stays the same. From year to year, educators see continued emphasis on embracing new and ever-changing technology, fulfilling state mandates, increasing student achievement and addressing high teacher turn-over rates. If we take care of the whole teacher, by using what we know about their personal goals and mission, we can build their identity, which in turn will lead to a more positive ownership of their professional place in society.

Ever since I first learned about action research, the research behind its success and how it is used in education, I became fascinated with it as a process in my own coursework and in my life. It is a logical no-brainer approach in education that I immediately knew I wanted to use with this research project. This action research study became an opportunity to foster exposure to action research for my students while I was also learning and participating in the process at the same time. It is important for educators to share learning experiences with their students and show them that we are all equally an active part of learning experiences. What I didn't realize until the conclusion of this study was that, while implementing this study, I was prompting opportunities to examine and build professional teacher identity for my teacher candidates but, their enthusiasm for what they were doing and what they were learning from me was building my own identity as a researcher as well.

As a teacher, there is no greater reward than to see your students succeed and feel good about themselves. This research study provided me that reward. They now know that graduation is not the finish line. It is just the beginning.

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APPENDIX A

TEACHER CANDIDATE STUDY CONSENT AND TIMELINE

Teacher Candidate Study Consent

Dear Teacher Candidate,

My name is Toya Abrams and I am a doctoral student in the Mary Lou Fulton Teachers College (MLFTC) at Arizona State University (ASU). I am conducting a research study to learn more about the senior-year student teaching experience.

I am inviting your participation during this Fall 2018 semester, which will involve completing questionnaires, participation in learning conversations, an Action Research Project professional development and completion of an Action Research project.

Participants, Methods, Risks, and Consent

You are being asked to participate in this study because of your enrollment in an ASU elementary education teaching cohort. Your participation is voluntary, and you have the right not to answer any question on the survey and you may stop participation at any time. If you choose not to participate or to withdraw from the study at any time, there will be no penalty whatsoever. You must be 18 years of age or older to participate.

Benefits to participation include an opportunity to increase your knowledge of teaching. There are no foreseeable risks or discomforts to your participation.

Your responses will be anonymous and measures will be taken to protect your confidentiality in this study at all times. The results of this study may be used in a dissertation but your name will not be used. The timeline and optional components of the study are attached on the following page.

Questions and Concerns

If you have any questions concerning the research study, please contact my Dissertation Chair Elisabeth “Betty” Gee at elisabeth.gee@asu.edu or myself, Toya Abrams, at toya.abrams@asu.edu

If you have any questions about your rights as a participant in this research, or if you feel you have been placed at risk, you can contact the Chair of the Human Subjects Institutional Review Board through the ASU Office of Research Integrity and Assurance at (480) 965-6788.

Thank you for your time and consideration of this request.

Sincerely,
Toya Abrams, Doctoral Student
Educational Leadership & Innovation EdD Program
Arizona State University, Mary Lou Fulton Teachers College

Teacher Candidate Study Consent, Page 2

Action Research Project Timeline

<u>First day of study (mid-August):</u> Participants will opt into the study and complete a questionnaire (15 minutes). The questionnaire will be administered in person on paper and includes 12 items.
<u>Mid-August):</u> Researcher will provide information session/professional development workshop for participants (4 hours). This will introduce them to the process of action research and the study's components.
<u>September:</u> Researcher will observe participants teaching a lesson and gather data for problem of practice justification (45 minutes). The data collected from the lesson observation will include finding an area of strength for the lesson and an area needed for improvement.
<u>September/Early October:</u> Participants will complete a literature review related to their problem of practice and submit to the researcher (one hour). This will include locating literature that will help support growth in the teaching area of need.
<u>October:</u> Participants will complete observations of other teachers and submit artifacts and journals to the researcher (6 days). They will collect notes from the observations and submit their notes to the researcher for details of their progress.
<u>October:</u> Participants will complete three learning conversations that will be audio recorded (3 hours). The conversations are in the Socratic Seminar format.
<u>Early November:</u> Researcher will observe participants teaching a lesson and gather data (45 minutes). The data collected from the lesson observation will include finding an area of strength for the lesson and an area needed for improvement, to be used for comparison to the previous lesson observation.
<u>Mid-November:</u> Participants will complete a final reflection that explains their experience (one hour). This will be given to the researcher for analysis of themes related to their growth in the learning process.
<u>End of November:</u> Participants will complete a questionnaire (5 minutes). The questionnaire will be administered in person on paper and includes 12 items.

Please read the following consent statement and if you agree, please indicate by signing below.

Consent Statement: I agree to participate in the survey being conducted.

I understand that neither my grade in this class nor my relationship with the college will be affected if I opt out of this study. I am at least 18 years of age.

Signature _____ Date _____

APPENDIX B

TEACHER CANDIDATE EXPERIENCE QUESTIONNAIRE

Teacher Candidate Experience Questionnaire

Please select one response for each statement.

- | | | | | | |
|--|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| 1. I am confident in my teaching skills. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 2. I have my own teaching style. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 3. Teaching is the right career choice for me. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 4. I am confident in my ability to problem solve in a classroom. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 5. I belong in a classroom. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 6. I believe that being a teacher means I am successful in life. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 7. I identify myself as a teacher. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 8. I am a role model for other teachers. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 9. I have high expectations for my career as a teacher. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 10. I view myself as a professional. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 11. I have the required competencies to be a successful teacher. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |
| 12. I view myself as a student. | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Strongly Agree | Agree | Slightly Agree | Slightly Disagree | Disagree |
| | | | | Disagree | Strongly Disagree |

APPENDIX C

TAP TEACHER EVALUATION RUBRIC

TAP TEACHER EVALUATION RUBRIC

	Exemplary (5)	Proficient (3)	Unsatisfactory (1)
Standards and Objectives	• All learning objectives and state content standards are explicitly communicated. • Sub-objectives are aligned and logically sequenced to the lesson's major objective. • Learning objectives are: (a) consistently connected to what students have previously learned, (b) know from life experiences, and (c) integrated with other disciplines. • Expectations for student performance are clear, demanding, and high. • State standards are displayed and referenced throughout the lesson. • There is evidence that most students demonstrate mastery of the objective.	• Most learning objectives and state content standards are communicated. • Sub-objectives are mostly aligned to the lesson's major objective. • Learning objectives are connected to what students have previously learned. • Expectations for student performance are clear. • State standards are displayed. • There is evidence that most students demonstrate mastery of the objective.	• Few learning objectives and state content standards are communicated. • Sub-objectives are inconsistently aligned to the lesson's major objective. • Learning objectives are rarely connected to what students have previously learned. • Expectations for student performance are vague. • State standards are displayed. • There is evidence that few students demonstrate mastery of the objective.
	Exemplary (5)	Proficient (3)	Unsatisfactory (1)
Presenting Instructional Content	Presentation of content always includes: • visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson; • examples, illustrations, analogies, and labels for new concepts and ideas; • modeling by the teacher to demonstrate his or her performance expectations; • concise communication; • logical sequencing and segmenting; • all essential information and; • no irrelevant, confusing, or nonessential information.	Presentation of content most of the time includes: • visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson; • examples, illustrations, analogies, and labels for new concepts and ideas; • modeling by the teacher to demonstrate his or her performance expectations; • concise communication; • logical sequencing and segmenting; • all essential information and; • no irrelevant, confusing, or nonessential information.	Presentation of content rarely includes: • visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson; • examples, illustrations, analogies, and labels for new concepts and ideas; • modeling by the teacher to demonstrate his or her performance expectations; • concise communication; • logical sequencing and segmenting; • all essential information and; • no irrelevant, confusing, or nonessential information.

	Exemplary (5)	Proficient (3)	Unsatisfactory (1)
Activities and Materials	Activities and materials include all of the following: • support the lesson objectives; • are challenging; • sustain students' attention; • elicit a variety of thinking; • provide time for reflection; • are relevant to students' lives; • provide opportunities for student-to-student interaction; • induce student curiosity and suspense; • provide students with choices; • incorporate multimedia and technology and; • incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, cultural centers, etc.). • In addition, sometimes activities are game-like, involve simulations, require creating products, and demand self-direction and self-monitoring.	Activities and materials include most of the following: • support the lesson objectives; • are challenging; • sustain students' attention; • elicit a variety of thinking; • provide time for reflection; • are relevant to students' lives; • provide opportunities for student-to-student interaction; • induce student curiosity and suspense; • provide students with choices; • incorporate multimedia and technology and; • incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, cultural centers, etc.).	Activities and materials include few of the following: • support the lesson objectives; • are challenging; • sustain students' attention; • elicit a variety of thinking; • provide time for reflection; • are relevant to students' lives; • provide opportunities for student-to-student interaction; • induce student curiosity and suspense; • provide students with choices; • incorporate multimedia and technology and; • incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, etc.).
	Exemplary (5)	Proficient (3)	Unsatisfactory (1)
Academic Feedback	• Oral and written feedback is consistently academically focused, frequent, and high quality. • Feedback is frequently given during guided practice and homework review. • The teacher circulates to prompt student thinking, assess each student's progress, and provide individual feedback. • Feedback from students is regularly used to monitor and adjust instruction. • Teacher engages students in giving specific and high-quality feedback to one another.	• Oral and written feedback is mostly academically focused, frequent, and mostly high quality. • Feedback is sometimes given during guided practice and homework review. • The teacher circulates during instructional activities to support engagement and monitor student work. • Feedback from students is sometimes used to monitor and adjust instruction.	• The quality and timeliness of feedback is inconsistent. • Feedback is rarely given during guided practice and homework review. • The teacher circulates during instructional activities, but monitors mostly behavior. • Feedback from students is rarely used to monitor or adjust instruction.

	Exemplary (5)	Proficient (3)	Unsatisfactory (1)
Managing Student Behavior	• Students are consistently well-behaved and on task. • Teacher and students establish clear rules for learning and behavior. • The teacher uses several techniques, such as social approval, contingent activities, and consequences to maintain appropriate student behavior. • The teacher overlooks inconsequential behavior. • The teacher deals with students who have caused disruptions rather than the entire class. • The teacher attends to disruptions quickly and firmly.	• Students are mostly well-behaved and on task, some minor learning disruptions may occur. • Teacher establishes rules for learning and behavior. • The teacher uses some techniques, such as social approval, contingent activities, and consequences to maintain appropriate student behavior. • The teacher overlooks some inconsequential behavior, but other times addresses it, stopping the lesson. • The teacher deals with students who have caused disruptions, yet sometimes he or she addresses the entire class.	• Students are not well-behaved and are often off task. • Teacher establishes few rules for learning and behavior. • The teacher uses few techniques to maintain appropriate student behavior. • The teacher cannot distinguish between inconsequential behavior and inappropriate behavior. • Disruptions frequently interrupt instruction.
	Exemplary (5)	Proficient (3)	Unsatisfactory (1)
Teacher Content Knowledge	• Teacher displays extensive content knowledge of all the subjects she or he teaches. • Teacher regularly implements a variety of subject specific instructional strategies to enhance student content knowledge. • The teacher regularly highlights key concepts and ideas and uses them as bases to connect other powerful ideas. • Limited content is taught in sufficient depth to allow for the development of understanding.	• Teacher displays accurate content knowledge of all the subjects he or she teaches. • Teacher sometimes implements subject-specific instructional strategies to enhance student content knowledge. • The teacher sometimes highlights key concepts and ideas and uses them as bases to connect other powerful ideas.	• Teacher displays under-developed content knowledge in several subject areas. • Teacher rarely implements subject specific instructional strategies to enhance student content knowledge. • Teacher does not understand key concepts and ideas in the discipline and therefore presents content in an unconnected way.
	Exemplary (5)	Proficient (3)	Unsatisfactory (1)
Teacher Knowledge of Students	• Teacher practices display understanding of each student's anticipated learning difficulties. • Teacher practices regularly incorporate student interests and cultural heritage. • Teacher regularly provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught.	• Teacher practices display understanding of some students' anticipated learning difficulties. • Teacher practices sometimes incorporate student interests and cultural heritage. • Teacher sometimes provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught.	• Teacher practices demonstrate minimal knowledge of students' anticipated learning difficulties. • Teacher practices rarely incorporate student interests or cultural heritage. • Teacher practices demonstrate little differentiation of instructional methods or content.

APPENDIX D

TAP RUBRIC DATA COLLECTION FORM

TAP Rubric Data Collection Form

TC Name:		Evaluator:		Date:	
Objective:		Subject:		Time:	
TAP Indicator	TAP Rubric (5-Exemplary)	TAP Rubric (3-Proficient)	TAP Rubric (1-Unsatisfactory)		
Standards & Objectives	- All learning objectives and state content standards are explicitly communicated. - Sub-objectives are aligned and logically sequenced to the lesson's major objective. - Learning objectives are: (a) consistently connected to what students have previously learned, (b) know from life experiences, and (c) integrated with other disciplines. - Expectations for student performance are clear, demanding, and high. - State standards are displayed and referenced throughout the lesson. - There is evidence that most students demonstrate mastery of the objective.	- Most learning objectives and state content standards are communicated. - Sub-objectives are mostly aligned to the lesson's major objective. - Learning objectives are connected to what students have previously learned. - Expectations for student performance are clear. - State standards are displayed. - There is evidence that most students demonstrate mastery of the objective.	- Few learning objectives and state content standards are communicated. - Sub-objectives are inconsistently aligned to the lesson's major objective. - Learning objectives are rarely connected to what students have previously learned. - Expectations for student performance are vague. - State standards are displayed. - There is evidence that few students demonstrate mastery of the objective.		
Evidence & Score					
Presenting Instructional Content	Presentation of content always includes: - visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson; - examples, illustrations, analogies, and labels for new concepts and ideas; - modeling by the teacher to demonstrate his or her performance expectations; - concise communication; - logical sequencing and segmenting; - all essential information and; - no irrelevant, confusing, or nonessential information.	Presentation of content most of the time includes: - visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson; - examples, illustrations, analogies, and labels for new concepts and ideas; - modeling by the teacher to demonstrate his or her performance expectations; - concise communication; - logical sequencing and segmenting; - all essential information and; - no irrelevant, confusing, or nonessential information.	Presentation of content rarely includes: - visuals that establish the purpose of the lesson, preview the organization of the lesson, and include internal summaries of the lesson; - examples, illustrations, analogies, and labels for new concepts and ideas; - modeling by the teacher to demonstrate his or her performance expectations; - concise communication; - logical sequencing and segmenting; - all essential information and; - no irrelevant, confusing, or nonessential information.		
Evidence & Score					

Academic Feedback	• Oral and written feedback is consistently academically focused, frequent, and high quality. • Feedback is frequently given during guided practice and homework review. • The teacher circulates to prompt student thinking, assess each student's progress, and provide individual feedback. • Feedback from students is regularly used to monitor and adjust instruction. • Teacher engages students in giving specific and high-quality feedback to one another.	• Oral and written feedback is mostly academically focused, frequent, and mostly high quality. • Feedback is sometimes given during guided practice and homework review. • The teacher circulates during instructional activities to support engagement and monitor student work. • Feedback from students is sometimes used to monitor and adjust instruction.	• The quality and timeliness of feedback is inconsistent. • Feedback is rarely given during guided practice and homework review. • The teacher circulates during instructional activities, but monitors mostly behavior. • Feedback from students is rarely used to monitor or adjust instruction.
Evidence & Score			
Activities and Materials	Activities and materials include all of the following: • support the lesson objectives; • are challenging; • sustain students' attention; • elicit a variety of thinking; • provide time for reflection; • are relevant to students' lives; • provide opportunities for student-to-student interaction; • induce student curiosity and suspense; • provide students with choices; • incorporate multimedia and technology and; • incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, cultural centers, etc.). • In addition, sometimes activities are game-like, involve simulations, require creating products, and demand self-direction and self-monitoring.	Activities and materials include most of the following: • support the lesson objectives; • are challenging; • sustain students' attention; • elicit a variety of thinking; • provide time for reflection; • are relevant to students' lives; • provide opportunities for student-to-student interaction; • induce student curiosity and suspense; • provide students with choices; • incorporate multimedia and technology and; • incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, cultural centers, etc.).	Activities and materials include few of the following: • support the lesson objectives; • are challenging; • sustain students' attention; • elicit a variety of thinking; • provide time for reflection; • are relevant to students' lives; • provide opportunities for student-to-student interaction; • induce student curiosity and suspense; • provide students with choices; • incorporate multimedia and technology and; • incorporate resources beyond the school curriculum texts (e.g., teacher-made materials, manipulatives, resources from museums, etc.).
Evidence & Score			

Managing Student Behavior	• Students are consistently well-behaved and on task. • Teacher and students establish clear rules for learning and behavior. • The teacher uses several techniques, such as social approval, contingent activities, and consequences to maintain appropriate student behavior. • The teacher overlooks inconsequential behavior. • The teacher deals with students who have caused disruptions rather than the entire class. • The teacher attends to disruptions quickly and firmly.	• Students are mostly well-behaved and on task, some minor learning disruptions may occur. • Teacher establishes rules for learning and behavior. • The teacher uses some techniques, such as social approval, contingent activities, and consequences to maintain appropriate student behavior. • The teacher overlooks some inconsequential behavior, but other times addresses it, stopping the lesson. • The teacher deals with students who have caused disruptions, yet sometimes he or she addresses the entire class.	• Students are not well-behaved and are often off task. • Teacher establishes few rules for learning and behavior. • The teacher uses few techniques to maintain appropriate student behavior. • The teacher cannot distinguish between inconsequential behavior and inappropriate behavior. • Disruptions frequently interrupt instruction.
Evidence & Score			
Teacher Content Knowledge	• Teacher displays extensive content knowledge of all the subjects she or he teaches. • Teacher regularly implements a variety of subject specific instructional strategies to enhance student content knowledge. • The teacher regularly highlights key concepts and ideas and uses them as bases to connect other powerful ideas. • Limited content is taught in sufficient depth to allow for the development of understanding.	• Teacher displays accurate content knowledge of all the subjects he or she teaches. • Teacher sometimes implements subject-specific instructional strategies to enhance student content knowledge. • The teacher sometimes highlights key concepts and ideas and uses them as bases to connect other powerful ideas.	• Teacher displays under-developed content knowledge in several subject areas. • Teacher rarely implements subject specific instructional strategies to enhance student content knowledge. • Teacher does not understand key concepts and ideas in the discipline and therefore presents content in an unconnected way.
Evidence & Score			
Teacher Knowledge of Students	• Teacher practices display understanding of each student's anticipated learning difficulties. • Teacher practices regularly incorporate student interests and cultural heritage. • Teacher regularly provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught.	• Teacher practices display understanding of some students' anticipated learning difficulties. • Teacher practices sometimes incorporate student interests and cultural heritage. • Teacher sometimes provides differentiated instructional methods and content to ensure children have the opportunity to master what is being taught.	• Teacher practices demonstrate minimal knowledge of students' anticipated learning difficulties. • Teacher practices rarely incorporate student interests or cultural heritage. • Teacher practices demonstrate little differentiation of instructional methods or content.
Evidence & Score			

TAP Area of Reinforcement	
TAP Indicator and Descriptor	
Evidence from Lesson	

TAP Area of Refinement	
TAP Indicator and Descriptor	
Evidence from Lesson	

Script from Lesson

APPENDIX E

ARP FINAL REFLECTION PROMPTS

Action Research Project Final Reflection

KEY (to help with questions/prompts below)

ARP = Action Research Project

Steps in the ARP:

- A. Personalized Problem of Practice (PoP) Identification
- B. Problem of Practice (PoP) Literature Review
- C. Teacher Learning Conversations (TLCs)
- D. Observations of Other Teachers
- E. Performance Assessments (pre and post)
- F. Meetings/Support/Course time with Site Coordinator

1. Describe your experience and thoughts related to the ARP you participated in this semester.
2. If there was a step/were any steps in the ARP that impacted you in any way, explain them along with how/why.
3. If there was a step/were any steps in the ARP that did not impact you any way, explain them along with how/why.
4. Provide any additional thoughts or feedback related to the ARP.