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A Case Study of the Percieved Effectiveness of the Two-Semester, Job-Embedded Internship

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A CASE STUDY OF THE PERCEIVED EFFECTIVENESS OF THE TWO-SEMESTER JOB-EMBEDDED INTERNSHIP

by

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ABSTRACT

The purpose of the study was to examine the perceived effectiveness of the two-semester, job-embedded internship for the development of effective Science, Technology, Engineering, and Mathematics (STEM) teachers. Students who were enrolled in the Resident Teacher Professional Preparation Program (RTP^3) were able to earn a Master's in the Art of Teaching (MAT), which included a two-semester, job-embedded internship. This study was designed to analyze the perceived effectiveness of the two-semester, job-embedded internship model at one urban high school from not only the resident teachers', but also designees and stakeholders of the RTP^3.

Resident teachers participated in the two-semester, job-embedded internship with the support of school site based mentors, school district and school site coaches, and university intern coordinators. The resident teachers participated in all aspect of the teaching process, and were evaluated using the school site evaluation instrument. As part of their internship, the resident teachers were evaluated using the Internship Assessment Summary Sheet. The resident teachers were also asked to participate in Lesson Study.

Data were gathered through both qualitative and quantitative sources. To collect qualitative data, interviews were conducted with the resident teachers, school site designees, school district designees and university designees. Each respondent was asked 10 questions developed by the researcher and vetted by experts in the field. The questions were designed to gather perceptions of effectiveness in preparation of the resident teachers, as well as strengths and weaknesses of the model. Recommendations for future use of the two-semester, job-embedded internship model were also gathered.

Quantitative data were collected and analyzed using the Internship Assessment Summary Sheet to assess the perception of the intern coordinators.

The findings were that the two-semester, job-embedded internship was overall perceived as an effective model in preparing STEM teachers. The model allowed resident teachers to be engaged in the teaching process from the beginning of the school year. The support that was given throughout the internship was beneficial in helping resident teachers with teaching practice. It was recommended that using frequent and actionable feedback should be continued. The one weakness of the model was the need for more pedagogical preparation, especially in the area of classroom management.

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CHAPTER 1
THE PROBLEM AND ITS CLARIFYING COMPONENTS

Background of the Study

For enhanced preparation for professional careers, numerous university programs have an internship or residency requirement. Often, the model of internship varies with the university and the program of study, as does the level of involvement by intern coordinators, time commitment, and passing requirements. Trends have shown that internships are needed at all levels and in all degrees to get ahead in the professional marketplace: "More than ever, schools across the country are pushing students of all majors toward internships, and several have even added them to their graduation requirements" (Burnsed, 2010). Considering teacher preparation specifically, internships have come a long way since the 1970s when most internship programs were designed as the culmination of the four-year bachelor degree: "Most teacher education programs in America, however, are still locked into undergraduate, four-year bachelor's degree curricula," (Andrews, 1970, p. 553).

Teacher preparation programs have become increasingly more important as the political pressure has increased to compete globally on international assessments. "Nations that have steeply improved their students' achievement, such as Finland, Korea, Singapore and others attribute much of their success to their focused investments in teacher preparation and development" (Darling-Hammond, 2010, p. 194).

As the United States attempts to compete successfully in a global arena, its teachers are being asked to place a greater emphasis on creativity and problem solving,

"Our nation's public schools are not contributing significantly to this country's capacity for creativity, imagination, and innovation any more than they are developing the problem solving skills of our students" (Wagner, 2008, p. 75). According to Wagner, the focus for high level thinking and problem solving has been shifting to the disciplines of science, technology, engineering, and mathematics (STEM), and teachers have been required to respond to the expectations for thinking and problem solving

> We have always wanted students to be creative thinkers and problem solvers who have the skills necessary to function effectively in society and in the workplace. The way in which these skills are incorporated in the classroom and how technology is integrated will greatly change instruction. (Beers, n.d, p. 4)

Therefore, educational leaders have sought to employ teachers who have both a strong pedagogical and deep disciplinary knowledge.

The target population for the present study was a group of graduate students at the University of Central Florida (UCF) in the College of Education and Human Performance (CEDHP). There were two types of education internships graduate students, not in cooperation with RTP^3, needed to participate in at the target college during the time of the study. The duration for both was one semester and required students to accept the full time role of a teacher or intern teacher five days a week with designated hours. Students taught for a minimum of 10 weeks and were evaluated using observations based on the Florida Educator Accomplished Practices (FEAPs) rubric (Appendix A). Each intern had a school district employed mentor teacher and a university employed intern coordinator from the University of Central Florida, (Zugelder & Nichols, 2013).

Two models of graduate internship existed. In one model, a graduate student was placed in a classroom with a collaborating teacher, and a co-teaching model was emphasized. The other model was a job-embedded internship where the graduate student was employed as the teacher of record and assigned to a school-employed mentor. The teaching responsibility belonged solely to the job-embedded intern. "It has become more common that teacher preparation programs embrace co-teaching models, where pre-service teachers and collaborating teachers work together to maximize student achievement potential" (Zugelder & Nichols, 2013, p. 9).

Resident Teacher Professional Preparation Program (RTP^3)

The Florida Department of Education awarded the Resident Teacher Professional Preparation Program (RTP^3) grant to the University of Central Florida to prepare graduates holding a bachelor's degree in a science, mathematics, engineering, or technology (STEM) field. Students selected were provided scholarships to earn a Master of the Arts in Teaching (MAT) degree to provide pedagogical expertise to complement their deep disciplinary knowledge. The goals of RTP^3 were:

> To raise mathematics and science achievement and career/college readiness of all 6-12 students by increasing the effectiveness of teacher preparation programs to better prepare teacher candidates through job-embedded preparation and induction. To improve and innovate teacher preparation content, delivery, and performance measures to increase the number of effective mathematics and

science teachers who are eligible for employment. (Program Evaluation and Educational Research Group [PEER], 2013, p. 7)

Statement of the Problem

A one-semester internship may not be adequate for science, technology, engineering, and mathematics (STEM) graduates who do not have experience in education, or background in educational research, theory, and pedagogy. It is necessary to evaluate how teachers are being prepared, including the length and intensity of the internship, in order to combat high levels of teacher attrition. The RTP^3 internship model enables a unique perspective on a two-semester, job-embedded internship model. Internship models like these need to be researched to give decision makers in colleges and universities data with which to modify current programs.

Purpose of the Study

The purpose of the study was to examine the perceived effectiveness of the two-semester, job-embedded internship for the development of effective STEM teachers. The two-semester, job-embedded internship model was used as the internship design for RTP^3 MAT resident teachers. An internship, clinical experience, or residency is associated with most teacher preparation programs. Some internships include only brief independent teaching experiences. RTP^3 required participants (resident teachers) to be full time teachers, with pay, while earning the Master of Arts in Teaching (MAT). During their time in the RTP^3, resident teachers participated in a two-semester, job-

embedded internship with both a university employed intern coordinator as well as a teacher mentor who was in their school, or in a nearby school, but not in the same classroom. The uniqueness of the model offers researchers insight as to how or if the model could be used in other settings.

Significance of the Study

New teachers who have not majored in education, but who have expertise in a STEM field, need to have opportunities to practice teaching with feedback to be successful. A job-embedded internship offered these individuals an opportunity to acquire teaching experience with feedback for improvement. It is important to determine to what extent the two-semester, job-embedded internship model effectively prepared resident teachers to be successful classroom teachers. The study could influence sustainability of the model as well as expansion to other teacher preparation programs.

Definition of Terms

Designee: An individual chosen to work with or on the RTP^3 grant as a portion of his/her job duties; the individual may be working through the school district, school site, or university.

Effective Teaching: Quality relationships, rigorous and purposeful learning experiences through planning and preparation that enhance learning and increase student achievement. Included in effective teaching is the measure of evaluating the resident teachers through the FEAPs rubric. The Internship Evaluation Summery Sheet rubric

includes a rating of Satisfactory or Unsatisfactory on various practices of effective educators. These are: assessment, communication, continuous improvement, critical thinking, diversity, ethics, human development and learning, knowledge of subject matter, learning environment, planning, role of the teacher, and technology.

Internship: Prior to graduation, pre-service teachers engage in opportunities to experience the classroom setting. "Almost without exception, every teacher preparation program whether housed in a small rural liberal arts college or in a large multidepartment college of education at a major state university requires at a minimum a 10-week student-teaching experience" (AFT K-16 Teacher Education Task force, 2000, p. 25).

Job-Embedded Internship: Students are employed by the school district and take courses for the duration of two-semesters or one academic year. Each student is the teacher of record. A school based mentor and a university intern coordinator are assigned to the students and guide them in the process.

Master of Arts in Teaching (MAT): The degree for students who have an undergraduate degree in a field other than education and wish to earn a graduate degree and certification in education.

Pedagogy: What teachers do within the confines of their job is considered pedagogy. Marzano defined pedagogy in three components, "use of effective instructional strategies, use of effective management strategies, use of effective classroom curriculum design strategies" (Marzano, 2007).

Resident Teacher: A resident teacher is a teacher and MAT student in RTP^3 whose clinical experience is the two-semester, job-embedded internship.

Resident Teacher Professional Preparation Program: The Resident Teacher Professional Preparation Program (RTP^3) operated out of the University of Central Florida (UCF), and was a partnership of UCF and five surrounding school districts.

Withitness: "Withitness" is the acute awareness of what is going on within a teacher's classroom.

Theoretical Framework

The first year of teaching can be described as a time of uncertainty, trial by fire, or a sinking ship which can be directly linked to the teacher preparation program (Scherer, 2012). Teaching goes beyond deep content knowledge. Effective teaching requires a firm grasp on the pedagogy and art of teaching, teaching,

> . . . not only requires subject matter expertise, pedagogical skills, and an understanding of student psychology, but it also demands the ability to keenly observe and respond to what each of 30 students is doing, saying, and meaning--individually and collectively. (Scherer, 2012, p. 7)

Depending upon requirements in a particular state, those who have obtained an undergraduate degree may be able to gain certification to teach. If importance is placed on the pedagogy of teaching, are these individuals ready to have the responsibility to teach a class? There are models of teacher preparation developed with individuals already having a degree in mind. The College of Education and Human Performance (CEHP) at the University of Central Florida (UCF) has required a graduate internship, whether on the job or obtained through the university. To be eligible for a one-semester

on-the-job internship, the individual must be a student who holds a job in "the content area, in which they will receive the graduate degree," (Zugelder & Nichols, 2013, p.5).

There are merits to job-embedded internships, especially in an urban school district. According to Darling-Hammond (2010), job-embedded internships create a "pipeline of committed teachers who are well prepared to teach in the high-need schools" (p. 218). The teacher preparation programs in Chicago and Boston to which Darling-Hammond referred last considerably longer than traditional internships. Resident teachers have been mentored for two years after placement in a classroom and required to teach for five years. The extended time for support and feedback goes beyond the first-year teacher experience. "Good preparation includes multiple chances to observe good teachers teach; a sufficient time to practice student-teaching under the supervision of an expert educator" (Scherer, 2012, p. 7). In other words teaching experience develops with guidance, mentoring, and feedback from others.

Research Questions

The following three research questions were used to guide the study:

1. What is the perception of resident teachers, university intern coordinators, and school district partner designees of the effectiveness of the two-semester, job-embedded internship for preparing STEM graduates to be effective mathematics and science teachers in the target high school?
2. What do resident teachers, university intern coordinators, and school district partner designees perceive to be the strengths and weaknesses of the two-

semester, job-embedded internship in preparing them to be effective mathematics and science teachers?

3. What is the process of the two-semester, job-embedded internship and what do the participants perceive should be changed?

The first and second questions relate to the perception of effectiveness that the two-semester, job-embedded internship has in preparing students with no pedagogical background to be effective teachers. The first question was related to the perceptions of university intern coordinators and school district partner designees of the effectiveness of the two-semester, job-embedded internship for preparing STEM graduates to be effective mathematics and science teachers in the target high school. The second question was related to the perception of the strengths and weaknesses of the two-semester, job-embedded internship. Both questions were directed to university intern coordinators, school district designees and resident teachers. The third question related to the process of the internship and any changes that could be made. Table 1 contains both the research questions and the data sources from which the questions were answered.

Table 1

Research Questions and Sources of Data

Research Question	Data Sources
1. What is the perception of resident teachers, university intern coordinators and school district partner designees of the effectiveness of the two-semester, job-embedded internship for preparing STEM graduates to be effective mathematics and science teachers in the target high school?	Interviews with resident teachers, university intern coordinators and school district partner designees Mean FEAPs scores demonstrating continued improvement
2. What do resident teachers; university intern coordinators and school district partner designees perceive to be the strengths and weaknesses of the two-semester, job-embedded internship in preparing them to be effective mathematics and science teachers?	Interviews with resident teachers, university intern coordinators and school district partner designees
3. What is the process of the two-semester, job-embedded internship and what do the participants perceive should be changed?	Interviews with resident teachers, university intern coordinators and school district partner designees

Methodology

Research Design

The study utilized the case study method. A single case design was used as the research was "focused on one individual or group" (Lunenburg & Irby, 2008, p. 97). The demographic information and interview data were analyzed to better understand how the two-semester, job-embedded internship was perceived. Analyzing a case study in one high school would reduce uncontrollable variables such as culture, and leadership. The

case study design was considered a valid method to explore the real life situation within the particular case. "In general, case studies are the preferred strategy when 'how' or 'why' questions are being posed, when the investigator has little control over events, and when the focus is on a contemporary phenomenon within some real-life context" (Yin, 2002, p. 1). The case study was developed with analyses of interviews to determine the perceived effectiveness of the two-semester, job-embedded internship model.

Sample

At the time of the collection of data to conduct the study, there were 70 resident teachers participating in the two-semester job-embedded internship. Data were collected from six of the resident teachers. The sample also consisted of school district designees, school site based administrators, and university intern coordinators, all working with a single school site in one of the partnered school districts. Six of the resident teachers were completing their job-embedded internship at an urban high school during the 2013-2014 school year, and one completed the job-embedded internship in the 2012-2013 school year. The resident teachers were employed in either a mathematics or science teaching position. The resident teachers were identified with an alpha-numeric code related to position and responsibility.

Instrumentation

Data were collected using separate, open-ended question interviews for each participant. The interview items can be found in Appendices B and C. These items were

designed by the researcher and reviewed by a panel of experts in the field of internship supervision.

Procedures

For the interview to be objective, certain procedures were followed. The first step was to ensure the interview was conducted in a neutral location free from distraction. The interviewer reviewed the purpose of the interview, how long the interview might take as well as the expectation for confidentiality and secured signatures for the informed consent (Appendix D). Prior to conducting the interview, the interviewer clarified permission to record and allowed the interviewee to ask any clarifying questions.

These interviews were recorded. The recorder was tested to be sure it was operational, and there was a back-up recorder. After the interviews took place the interviewer took time to write any extra notes and ensure again that the digital recorder worked. After all interviews were completed, the interviews were transcribed. This means the interviews were prepared in a way that allowed the researcher to analyze the responses and used notes for clarification. In analyzing the transcriptions, the researcher attempted to identify common themes within the responses. The results were then reported within the study.

Interview Analysis

Once the interviews were completed and transcribed, the data were read for themes. Patterns of responses and differences among preparation and courses taught by

participants were noted. The interviews were further analyzed for the difference in perceptions of the resident teachers, school, school district designees, and intern coordinators.

Limitations

1. The study was conducted as a single case study. As such it could be thought to have limited ability to be generalized.
2. Due the subjective nature of human interpretation of the data as it relates to the interviews, the results could possibly be skewed toward the researcher's preconceived notions as to the effectiveness or ineffectiveness of the two-semester, job-embedded internship.
3. The study was based on participants' perceptions, at a single school site, and may not be representative of the entire population of job-embedded internship participants.
4. The school site is an uncontrolled environment that may be affected by unique variables (e.g., school culture and demographics) not found in other school sites.

Delimitations

The six resident teachers who were interviewed worked at one school site. The large urban high school utilizing the six resident teachers has the most participants from any school, making it suitable for a case study. By restricting the interviews to one

school site, variables such as student poverty, principal, and resources were narrowed and may have influenced the participants' perceptions and responses.

Assumptions

1. It was assumed that those interviewed answered truthfully and completely.
2. It was assumed that those being interviewed had an understanding of the questions being asked and were answering to the best of their ability.
3. It was assumed that the findings from the case study would be applicable to other internship programs with similar characteristics.

Organization of the Study

This is a case study presented in five chapters. The background, purpose and significance of the study, a problem statement, definition of terms, theoretical framework, research questions, and the methodology including the interview questions have been presented in Chapter 1. Chapter 2 contains a review of the literature and research relevant to effective teaching, teacher preparation programs, field experience, and teacher attrition. Chapters 3 and 4 contain the methodology and contexts of the case including historical background and analysis of the data. Chapter 5 summarizes the findings of the study and provides implications for teaching preparation programs and recommendations for future research.

CHAPTER 2
REVIEW OF THE LITERATURE

Introduction

In the early 21st century, there was a shortage of qualified teachers who were equipped to teach high school students in certain critical needs areas. These areas include, but were not limited to, science, technology, mathematics and engineering (STEM) courses. Unfortunately, although teachers have been hired for these critical need STEM positions, they have often left the field, perpetuating a cycle of teacher attrition and teacher shortages. It has become important to evaluate why STEM teachers leave the field and how can teacher attrition be prevented, (Heafner, Teresea, & Hartshome, 2011; Freeman, Simonsen, Briere, & MacSuga-Gage, 2013; Raychaudhuri, 2013). One of the leading causes of teacher attrition, according to Darling-Hammond (2003), is lack of appropriate teacher preparation. Teacher attrition has caused decision makers to review and recreate teacher preparations programs as well as focus on the internship programs.

To establish a background and general understanding of the internship component as it relates to teacher preparation and effective teaching, a database search was conducted of the University of Central Florida's library resources. Included was a search of Education Full Text, ERIC, and One Search. The researcher sought articles that were peer reviewed and written within the last 14 years to ensure the information was relevant and up to date. It was important the articles were presented as full text. The key words used to search these databases were teacher preparation programs, internship design, effective teaching, job-embedded preparation, and context internships. Several of these

searches were paired with urban schools, urban teachers and or science and mathematics education or teachers. Several online journals were used including *Australian Journal of Teacher Education, Journal of Digital Learning in Teacher Education, Journal of Science Teacher Education, Journal of the Scholarship of Teaching and Learning, Educational Leadership, The Teacher Educator, Teacher Education Quarterly, Perspectives on Urban Education,* among others. Additionally, the University of Central Florida's book collection was searched using teacher preparation programs and urban education as key words. Researchers prevalent within the journal articles were also searched.

Finally, by using the Internet, various public policy and professional organizations were searched including the following: Association of Supervision and Curriculum Development, Council for the Accreditation of Educator Preparation and National Council on Teacher Quality, U.S. Department of Education and State Rules. Reports, technical papers, and statutes from these sites were collected and analyzed.

Each of the sources were read, reviewed, and analyzed for relevance as they pertained to the research questions. A summary of the review of the literature can be found in the following four major sections of this chapter.

The first section focuses on teacher attrition and the impact it has on schools and students. It includes literature related to the prevention of attrition as it relates to STEM teachers in urban settings and to the need for RTP^3. The second section focuses on the concept of effective educators and includes both the political definition of effective teaching and the instructional leader definition of what effective teaching looks like. The

research was relevant to establishing the effectiveness of new RTP^3 teachers. The third section is concerned with teacher preparation programs and the importance of preparing pre-service teachers for positions in both the mathematics and science fields as it relates to urban education. Researchers have largely agreed that a solid preparation program is key to retaining effective teachers in the STEM field and that there is a need to review current programs with potential to reevaluate these programs. The fourth and final section of the chapter focuses on internship programs and the various models. The policies behind internship models as well as their importance to the teacher preparation program are reviewed.

Teacher Attrition

Teacher attrition or the loss of quality teachers is a concern that has affected schools and school districts. This important issue can be seen in urban school settings (Darling-Hammond, 2003; Duncan, 2014; Freeman et al, 2013; Raychaudhuri, 2013). Concerns can be addressed during teacher preparation to prevent teacher attrition.

Teacher attrition affects some of the highest needs schools in the mathematics and science areas, (Ingersoll, Merrill, & May, 2012; Raychaudhuri, 2013). The key to decreasing teacher attrition is to make keeping effective teachers a priority for educational leaders (Darling-Hammond., 2003).

According to Darling-Hammond, (2013), teacher attrition is a financial burden on schools and school districts. As teachers are hired, money is spent on training and preparing them to work in a school. This is money lost when the teacher decides to leave

the profession, causing funds to be used in continually preparing, hiring, and training new teachers when it could have been spent on cultivating and growing the beginning teacher. Often teachers who are under qualified or ill prepared are hired in urban schools. This increases the chance of these teachers leaving; regularly exposing the highest need students to low quality education (Darling-Hammond, 2003).

Darling-Hammond noted in 2003 that teachers' salaries were approximately 20% lower than salaries in other professional positions. Another key factor is working conditions. Urban school setting have continually presented challenges in their working conditions for which teachers are not well prepared, such as lack of supplies and textbooks as well as under maintained facilities. One of the main reasons for teacher attrition in urban schools has been the lack of teacher preparation in their pre-service programs, (Darling-Hammond, 2003, Ingersoll et al., 2012; Raychaudhuri, 2013). When investigating specific content within the context of an urban school setting, "New interns specializing in mathematics or science were 10% more likely to leave teaching at the end of their first year of teaching than teachers specializing in other content areas," (Piccolo, Capraro, & Capraro, 2010, p. 38). This makes a strong case for attending to the preparation of mathematics and science teachers in urban school settings.

Appropriate teacher preparation is the key to retaining teachers; this is especially true in the mathematics and science field: "Our findings are striking: the pre-service education and preparation of new mathematics and science teachers are strongly related to their retention" (Ingersoll et al., 2012, p. 31). Attrition rate was not necessarily dependent on previous degrees or methods of certification, as mathematics and science

teachers enter may education through non-traditional paths. The key relationship is pedagogy. "Beginning teachers who had taken more courses in teaching methods and strategies, learning theory or child psychology, or materials selection were significantly less likely to depart" (Ingersoll et al., 2012, p. 33). Piccolo et al. (2010) noted that mathematics and science teachers often have been more comfortable teaching their content, stating that "Typically, interns felt more secure with their teaching of mathematics than they did with general pedagogical aspects of teaching, such as classroom management, lesson design, and differentiated student instruction" (p. 50).

Classroom management, especially in the urban schools, is a source of stress for beginning teachers. This is another factor in teacher attrition (Ingersoll et al., 2012). With proper teacher preparation and field experience, as well as continued support from an educational leader, teacher attrition has the potential to decrease (Darling-Hammond, 2003).

Effective Teaching

In education there has been a shift or a pendulum that swings in accordance with new thinking, new technology, new ideas or revisiting previous thinking or previous methods. Education is constantly changing and ever shifting. The concept of educational shift has become commonplace with educators, (Jenkins, 2012). As instructional practices are modified, so is the method by which teachers are evaluated or deemed effective. In the past, teacher evaluations looked very different.

There are different perceptions of what is considered an effective teacher; The question is not what does effective teaching look like, but what effective teaching should be gauged on. Stronge, Ward, and Grant (2011) responded with "teacher inputs (e.g., qualifications), the teaching process (e.g., instructional practices), the product of teaching (e.g., effects on student learning), or a composite of these elements" (p. 340).

There are unknowns that cannot be measured by the output of the student, such as home life, test anxiety, and what the student brings to the test as far needs not being met. Additionally, there are classroom practices the standardized test cannot assess such as grouping students for intervention, (Max & Glazerman, 2014). Teachers are held responsible for student output, which is often measured, in the value-added portion of the evaluation. Max and Glazerman posited that:

> a teacher has the same impact on all of his or her students. There may be differences in how teachers devote their time to different students within the classroom. [Additionally,] there may be unmeasured influences, such as the sorting of students across classrooms, that value-added indicators fail to account for. (p. 4)

Effective teaching can be visible in the classroom. A great deal of effective teaching involves practices and instructional strategies, interactions within the classroom, practices that occur on case-by-case bases such as recognizing non-engagement, teacher withitness and building relationships with students though celebration, expressing interest and demonstrating affection, (Marzano, 2012).

Effective education can be identified in the classroom through instructional practices that are not measured directly on a standardized test. These include the way that instruction is presented, differentiation of instruction, the depth of rigor within instruction, focus on the standards and expectations set for all learners. The learning environment is also a component of effective instruction. The environment should be a positive place with an established culture of focused on the expectations of the learner, collaboration and current teaching practices, (Stronge et al., 2011). Lesson delivery is a key component to effective instruction. Teachers need to understand the standards being taught and be able to plan to link the learning objectives to the activities, (Jackson, 2012).

One of the most important factors of teacher effectiveness are personal qualities of the teacher and relationship building, "Teachers who convey that they care about students have higher levels of student achievement than teachers perceived by students as uncaring," (Stronge et al., 2011, p. 341). Effective teachers are able to look at the whole child by focusing on strengths of children and helping them build personal connections to content. Effective teachers understand what behaviors the students bring to class and why students behave a certain way, (Jackson, 2012).

Meta-analysis is a method of study that measures the effect size of several studies to determine the overall effect of methods. In Hattie's (2009) meta-analysis, the effect size of teacher student relationships was 0.72 which meant that there was a high zone of desired effects. "In classes with person-centered teachers, there is more engagement, more respect of self and others, there are fewer resistant behaviors, there is greater non-

directivity (student-initiated and student regulated activities), and there are higher achievement outcomes" (Hattie, 2009, p. 119).

The personal qualities of teachers are key to building relationships within the classroom that have an impact on student achievement. Strong classroom management and being able to maintain learner engagement through classroom management is key to effective teaching, (Marzano, 2007; Stronge et al., 2011). Beginning teachers often struggle with the classroom management component of effective teaching. Their lack of quality classroom management skills interferes with instructional delivery and processes. When the classroom management component is lacking, beginning teachers find themselves unable to complete lesson plans, and they cannot follow their own rules. They make threats, lose their tempers or try to bargain and reason with an unruly student. These instances take away from classroom instruction and also create a cycle of ineffective instruction,(Sandholtz, 2011).

Poverty and Effective Teaching

Economically disadvantaged students are considered students who come from low-income homes. These students can be identified through qualification of free and reduced lunch, (Duncan, 2014). Although the researcher found limited studies on the topic, findings in available studies showed disadvantaged students have less access to effective teaching (National Center for Education Statistics, 2012) than their more advantaged counterparts. "Many students in urban schools only have a 50% chance of being taught by qualified teachers" (Piccolo et al., 2010). There were three studies

spanning various school districts and states. All three studies indicated a gap in effective teaching and disadvantaged students. In one study, the measurement was based on the Effective Teaching Gap which was used to compare "the average effectiveness of teaching experienced by non-disadvantaged students with the average effectiveness of teaching received by disadvantaged students" (Isenberg, Max, Gleason, & Santillano, 2013, p. ES4). In some cases the gap was large enough to equate to weeks of lost instruction, (Max & Glazerman, 2014).

Additionally, "While family and poverty deeply affect student performance, research over the past decade indicates that no in-school intervention has a greater impact on student learning than an effective teacher" (Zimpher & Jones, 2010, p.1). It is necessary to have effective teachers in classrooms and to prepare teachers for effective careers it is necessary to look at the teacher preparation programs.

Teacher Preparation Programs

Purpose of Teacher Preparation Programs

Teacher preparation programs are the foundational education pre-service teachers receive acting as academic structures bridging theory and practice, usually through a university or college setting. The purpose is to develop productive and effective teachers regardless of the students being taught, (Cummins & Asempapa, 2013; Darling-Hammond & Bransford, 2005). As education changes, it becomes necessary to change teacher preparation programs. With a shift toward the 21st century skills, there is a focus

on teacher preparation moving toward school-based experiences. Often these changes are brought on by legislation that places requirements on colleges and universities or studies evaluating the effectiveness of certain types of programs. It is important that teacher preparation programs work with area school districts,(Zimpher & Jones, 2010). There are various different models of teacher preparation programs. In some cases universities will differentiate programs to meet the needs of the schools the teachers will be serving.

Teacher preparation programs are in place to "enable teachers to acquire the knowledge, skills, and dispositions that will allow them to succeed" (Darling-Hammond & Bransford, 2005, p. 390). Raychaudhuri (2013) developed a framework for teacher preparation that focused on the different pathways that mathematics teachers take to become certified teachers. The framework strives for rigor, relevance and retention. The three Rs framework has been aimed at using four modules in preparing and retaining secondary mathematics teachers in high needs schools. These modules include challenges in mathematics content, challenges in high-needs schools, content in context, and incorporation of technology. Raychaudhuri (2013) expressed the belief that this framework will help retain mathematics teachers. In order to properly prepare teachers to succeed with all students, teacher preparation programs should have one major goal with three parts: "to build prepared and competent teachers who are 1) knowledgeable in the content (mathematics), 2) capable to deploy the content in context (high-school), and 3) resilient in the face of challenges that a high-need school can offer" (p. 1).

History of Teacher Preparation Programs

Teacher preparation programs typically combine pedagogical information with practical application. In the 1980s, teacher preparation programs were thought to be too focused on theory and not as focused on the practice of teaching. These programs offered segmented courses that did not follow a theme and lacked consistency. As these programs changed, a more consistent and coherent theme emerged. Programs in the late 1980s began to offer a more consistent vision, scaffolding the pedagogical courses to the clinical experience. Programs with a strong vision of teaching and learning, linked with appropriate pedagogical coursework and a quality field experience, have a greater impact on the pre-service teacher as they move into the profession of education, (Darling-Hammond & Bransford, 2005; Greenberg, Walsh, & McKee, 2014).

Policy of Teacher Preparation Programs

Different states have had different requirements approving educator preparation programs. As a result, colleges and universities have had varied requirements for their teacher preparation programs, (Greenberg et al., 2014), and there has been continued debate regarding the effectiveness of the various types of programs including face-to-face, online teacher preparation programs, and subject or context based programs.

Pre-service teachers may go through various paths to begin their careers. These paths are dependent on degree level and how the pre-service teacher intends to be certified. Pre-service teachers may attend a college or university with state-approved teacher preparation programs to become eligible for a certificate after graduation,

(Darling-Hammond, 2000; Freeman et. al. 2013). Teacher preparation programs have been under close examination as the field is struggling with a lack of teacher quality and a questionable teacher shortage, (Darling-Hammond, 2000; Freeman et. al. 2013; Raychaudhuri, 2013). Teacher preparation has become a topic of discussion for states' legislators and state school boards "with 33 states passing significant new oversight laws or regulations and another seven states starting to make inroads over the last two years," (Greenberg et al., 2014, p. 15).

Though there have been changes made, there are still areas where improvement is needed. When focusing on content, the National Council on Teacher Quality found "23 states cannot boast a single program that provides solid mathematics preparation resembling the practices of high-performing nations" (Greenberg et.al. 2014, p. 3). In the 2014 Teacher Preparation Review, it was found that four of five teacher preparation programs that were evaluated came out below standards. In addition to course work, these changes have also impacted the field experience (Greenberg et. al., 2014).

In the 2010 NCATE Blue Ribbon Panel on Clinical Preparation and Partnerships for Improved Student Learning, the former national accreditation council recommended a modification to teacher preparation called the Clinically Based Model for Teacher Preparation. In the Clinically Based Model for Teacher Preparation all the components of teacher preparation were focused around the clinical experience or internship. This includes content, pedagogy, and coursework. Additionally, the model calls for a partnership that is developed with a university and a school district. Though these programs are not common, according to the National Council for the Accreditation of

Teacher Education (Zimpher & Jones, 2010), the Clinically Based Model for Teacher Preparation programs do have advantages over traditional programs. Pre-service teachers learn specifically what is needed. The partnership schools know the teaching candidates are coming equipped to teach to specific needs in specific school districts, (Zimpher & Jones, 2010).

Content of Teacher Preparation Programs

Teacher preparation programs include courses and directed teaching or field experience. Waiting until the directed teaching to address certain components such as discipline, classroom management or content can become a concern. This is especially true for teachers teaching specific content such as mathematics or science or in a specific context such as a high needs or urban school. There may be a point where content or context specific programs are needed. When thinking about content and the purpose of teacher preparation, it is expected that beginning teachers are proficient at content and pedagogy, (Heafner et al., 2011). Beginning teachers are entering the field with a basic knowledge of these important components of teaching. For this reason, a content based preparation may be the solution to the development of effective content specific teachers. "We argue that rigorous content background is the initial point, the pivotal foundation in the math major's journey as a teacher" (Raychaudhuri, 2013, p. 2).

Teacher Preparation for Specific Environments

Beyond preparing teachers for content, researchers have begun to think about how to prepare teachers for context. As stated, the purpose of teacher preparation is to prepare teachers for all learners. Different environments have different needs. Already there is varied preparation for the different levels of learning in elementary, middle, and high schools. There is concern about how to prepare teachers for the different needs of students in the environmental context. According to Matsko & Hammerness (2014), the question becomes "Should preparation programs concentrate on preparing teachers for all settings and all students, or should they prepare candidates for specific types of contexts and the students within them?" (p. 128). Typical teacher preparation is focused on general pedagogical practices. Yet with the purpose of preparing teachers for all students, teachers may lack skills that would help them be effective in complex settings such as urban schools. There is a shift toward culturally relevant pedagogical courses to better assist pre-service teachers in understanding the different cultures and currencies that students bring to the classroom (Matsko & Hammerness, 2014). There are specific teacher preparation programs for a variety of contexts including urban education such as the Urban Education Program at The University of Chicago.

Classroom Management in Teacher Preparation Programs

The effective teacher must be able to have positive personal qualities including the ability to build relationships. The ability to establish and maintain a positive classroom culture and classroom management skills are also necessary in order for

teachers to be effective, (Hudson, 2012). According to Hudson (2012), beginning teachers lack preparation in classroom management and development of methods that can help manage misbehaviors in the classroom. Additionally, "Managing challenging students can lead to emotional exhaustion" (Hudson, 2012). Freeman et al. (2013) ". . . reviewed 111 teacher preparation programs and found that overall only 36.9% contained a specific course focused on classroom management" (p. 107).

One main reason that teachers in urban settings struggle with classroom management is due to a lack of understanding their students' backgrounds. Teachers need to be aware of why students act a particular way to intervene before behavior impacts classroom instruction. Effective teachers need to be "taught to 'see' individual pupils by developing astute observation skills and awareness of the various lenses through which their behavior is interpreted" (Matsko & Hammerness, 2014, p. 135).

Internship Component of Teacher Preparation

The internship component of teacher preparation programs is intended to be an impactful experience that can potentially shape pre-service teachers. People in the education field have argued that the internship experience could be the most important part of a pre-service teacher's education (Anderson & Stillman, 2012; Darling-Hammond & Bransford, 2005). The internship experience can vary greatly depending on the teacher preparation program requirements and those involved in guiding the internship. The valuable internship experience can come in different models, and the minimum requirements may be guided by legislation.

In Florida, legislation that guides the internship component of teacher education is state statute 1004.04. It has mandated state approval for teacher preparation programs including requirements for the pre-service field experience. Found in State Rule 1004.04(6 A-D), the pre-service experience must include strategies in classroom management, and instructional strategies. Clinical educators, who are bound by specific criteria including training and evidence of effective teaching practice, guide the pre-service experience (Florida Senate, 2012).

Components of internship programs include a placement with an effective teacher for a period of time in which pre-service teachers are required to teach. The internship experience can take different forms, including supervised professional experience with observation hours, directed teaching internships, and on-the-job internships, (Anderson & Stillman, 2012; Salter, Hill, Navin, & Knight, 2013). Though the internship design can differ based on what is required by the college or university, the major difference in design may be time spent on the internship as a whole. Other differences may include time teaching in the classroom, communication to parents, and incorporation of initiatives such as lesson study (PEER, 2014).

Some colleges and universities place value on quickly placing pre-service teachers in teaching positions by reducing the amount of time spent in the internship. Darling-Hammond and Bransford (2005) observed that there is a relationship between the longevity of the internship and the impact on student learning both for the classroom students and the intern. At the same time, however, though the length of the time spent in the classroom is important, that alone is insufficient to creating an effective teacher,

(Darling-Hammond & Bransford, 2005; Salter et al., 2013). In one set of studies focusing on students from the same institution but with a varied learning length of learning experience, ". . . the group of teachers with more extensive field experiences and more education coursework produced stronger student gains on pre- and post-test of learning within curriculum units designed by the students teachers" (Darling-Hammond & Bransford, 2005, p. 411). Though there is not a perfect formula for amount of time spent in the classroom in an internship experience, internships may average only 10 to 12 weeks (Darling-Hammond & Bransford, 2005). As of 2014, "32 states now require the student teaching experience to be an adequate length, up from 29 in 2011" (Greenberg et al., 2014, p. 9). This means that there is an emphasis on creating experiences that offer students plenty of time in the classrooms.

One major factor in the internship process is the individual or individuals responsible for guiding the intern through the process at the site level as well as the university level. Pre-service teachers are assigned to a supervising teacher or teacher educator from the school and a coordinator from the college or university. These individuals are responsible for providing feedback or offering opportunities for reflection for the pre-service teacher (Darling-Hammond & Bransford, 2005). Unfortunately, the supervising teacher may not have the skills to support these new teachers. Greenberg et al. wrote in 2014, "5 states (Florida, Illinois, Massachusetts, Rhode Island and Tennessee) now require that student teachers only be assigned to cooperating teachers who have been found to meet some measure of effectiveness, up from 2 in 2011" (p. 9).

Resident Teacher Professional Preparation Program (RTP$^{3)}$ Internship

The RTP^3 at the University of Central Florida had a very specific internship component. In this program, resident teachers were required to secure employment in a partnering school district making the experience an on-the-job internship. The duration was two semesters, rather than the average 10 to 12 weeks. The resident teachers were given large support for their learning process that included individuals at the school site, the school district, and the university.

In typical teacher preparation programs, teachers complete the internship after the pedagogical courses. In the RTP^3, resident teachers began course work over the summer prior to the start of the job-embedded internship and continued coursework through the internship. In this program, all resident teachers held content-specific degrees in science, mathematics, or engineering to meet the high needs of the local school district partners, (PEER, 2014).

Summary

This chapter contains a summary of the literature reviewed on teacher attrition and the need for teacher preparation. Without a proper teacher preparation program including internships, teachers feel unprepared for challenges in the classroom. This leads to teacher attrition and heavy costs for school districts, schools, and ultimately students. The literature on effective education was analyzed and the qualities of an effective educator, as described by experts in the field, were documented. Content in this chapter also established the need for quality teacher preparation programs as related to

both STEM teachers and an urban education setting. Teacher preparation programs were discussed, focusing first on the purpose of teacher preparation programs, then a brief history and the changes that have been made, as well as the policies that have guided teacher preparation programs. The focus of teacher preparation was narrowed to address content and context needs including preparation for specific environments and classroom management. A large component of the teacher preparation program is the internship portion. The impact of legislation was discussed along with different models of internships which have emerged. It was established that the length of the internship as well as proper support is needed to create an effective field experience.

Chapters 3, 4, and 5 present a case study (the methodology, data analysis, and discussion) focused on one model of internship. It will be presented, maintaining focus on the effectiveness of an extended internship model that would meet the needs for STEM teachers in an urban setting.

CHAPTER 3
METHODOLOGY

Introduction

The goal of the internship experience is to provide pre-service teachers opportunities to use strategies that will help them be effective educators. There are differences between internship experiences including the amount of time spent in the classroom and the level of support that is provided to the pre-service teacher (Darling-Hammond & Bransford, 2005). The RTP^3 has supported MAT students during a two-semester job-embedded internship.

This study was conducted to examine the perceived effectiveness of the internship model using a mixed methods case study design. The focus of the case study was on one high school that hired more resident teachers than any of the other schools within the partner school districts.

This chapter has been organized using five sections. The first section establishes the purpose of the study of the RTP^3 grant and the high school as a case study. The selection of participants is described in the second section. Instrumentation used in the study, including interview procedures, is detailed in the third section. Sections 4 and 5 contain a discussion of the data collection and analyses processes respectively.

Purpose of the Study

The purpose of this study was to determine the perceived effectiveness of the two-semester, job-embedded internship in an urban high school. In reviewing the literature,

the researcher established that urban schools struggle with recruiting and retaining qualified STEM teachers. Additionally, the lack of teacher preparation correlates with the lack of effectiveness of beginning teachers. Although legislation and the results of research have guided the change of teacher preparation and internship design, it is important that perceptions are further examined so as to understand in which direction changes should be made in the future.

Research Questions

This study was guided by the following three research questions.

1. What is the perception of resident teachers, university intern coordinators and school district partner designees of the effectiveness of the two-semester, job-embedded internship for preparing STEM graduates to be effective mathematics and science teachers in the target high school?
2. What do resident teachers university intern coordinators and school district partner designees perceive to be the strengths and weaknesses of the job-embedded two-semester internship in preparing them to be effective mathematics and science teachers?
3. What is the process of the two-semester, job-embedded internship and what do the participants perceive should be changed?

Participants

RTP[3] selected 81 of 138 applicants to receive a scholarship that included full tuition towards a MAT degree. Of those selected, 79 students started the program; one of the criteria for selection was to obtain a full time position teaching STEM content in a secondary school setting (PEER, 2014). School District A hired 37 RTP [3] resident teachers, and High School A employed six resident teachers from the RTP [3] (PEER, 2014). Six resident teachers were more than any other single school within the school district partners. Due to the number of resident teachers and the uniqueness of the school setting (urban high needs high school), the school was chosen as a location for the case study.

The six residents teachers included four females and two males, teaching courses in Biology, Chemistry, Algebra 2 or Advanced Algebra. The resident teachers had varied undergraduate degrees in the fields of either engineering or biology. All of the six resident teachers were asked to participate in interviews. Of the six, five agreed to do so. Table 2 contains professional demographics for the five resident teachers who participated in the case study.

Table 2

Resident Teacher Participants Interviewed in High School A

Alphanumeric Code	Gender	Undergraduate Degree	Course Taught
RT1	F	Industrial Engineering	Algebra 2, Advanced Algebra with Financial Implications
RT2	M	Mechanical Engineering	Algebra 2
RT3	M	Biology	Chemistry
RT4	F	Biology	Biology
RT5	F	Microbiology and Molecular Biology	Biology

In addition to interviewing resident teachers, designees from both School District A and the university were interviewed and shared their perceptions. Included were seven individuals: four females and three males. Though their job descriptions varied, all were in positions of instructional leadership. The university executive director of undergraduate affairs and partnerships was interviewed because he oversees teaching internships. Detailed information on the designees is provided in Table 3. All seven (100%) of those designees invited to participate and be interviewed agreed to do so.

Table 3

Participants: School Site, School District, and University

Alphanumeric Code	Gender	Affiliation	Job Title	Relationship to RTP[3]
SD1	F	School District A	Senior Administrator	Oversaw and mentored resident teachers on lesson study
SD2	F	School District A	Director	Oversaw and mentored resident teachers on lesson study
UD1	M	University of Central Florida	Intern coordinator	Oversaw, evaluated, and graded resident teachers' internship
UD2	F	University of Central Florida	Intern coordinator	Oversaw, evaluated, and graded resident teachers' internship
UD3	M	University of Central Florida	Executive Director Undergraduate Affairs and Partnerships	Oversees clinical experiences
SS1	M	High School A	Instructional Coach of Induction	School site coach/mentor
SS2	F	High School A	Principal	Employed and evaluated resident teachers

There were 12 individuals who participated in the interview portion of this study, an appropriate number as suggested by Lunenburg and Irby (2008) "for qualitative research use between 1 to 20 participants" (p. 179). As this study was conducted as a case study, the individuals were selected based on their relationship with the resident teacher portion of the program. To have a full understanding of all perceptions, it was important to have conversations with multiple people who could offer insight.

Instrumentation

The researcher wrote the Designee Interview Questions (Appendix B) and Resident Teacher Interview Questions (Appendix C) used in the study to address the research questions. The items were initially designed in a way that would allow the interviewee an opportunity to think about the effectiveness of the two-semester, job-embedded internship model. The researcher first took a draft of the items to a panel of experts in the field for a review of content and construct validity. The panel included former principals, intern coordinators, and instructional leaders for feedback and further development. As a result of the process, two similarly designed, semi-structured, open-ended, interview templates were developed, each consisting of 10 items.

There were 12 participants in the interviews. Included in the interview of the principal was an additional item requesting further information and insight into High School A. The semi-structured, opened-ended interview items allowed for additional follow-up items if necessary. The interview process allowed the researcher to look for body language or vocal tone that might suggest that there was a need to probe a little more deeply

The second instrument used was the Internship Assessment Summary Sheet (Appendix A) which was designed by the University of Central Florida to evaluate interns using the Florida Educator Accomplished Practices or FEAPs based on the Internship Assessment Summary Sheet. The two intern coordinators completed the evaluation tool for the five resident teachers. The tool was completed to grade and provide feedback on the resident teachers' effectiveness in the classroom each semester.

The researcher reviewed the ratings on the Internship Assessment Summary Sheet to establish the perceived effectiveness of the resident teacher by of the intern coordinator. Although the analysis of the data in the rubric was quantitative, it was perception data based on observations of the university employed intern coordinators.

Data Collection

This study utilized mixed methods of qualitative and quantitative data collection and analysis. These are described separately in both the data collection and data analysis sections.

Qualitative

The first step in the qualitative interview process was to acquire the names of the individuals to be interviewed. A meeting was arranged with a designee from Program Evaluation and Educational Research, PEER at UCF, to discuss the RTP^3, the participants, and to determine the schools that could be considered as the site of a case study. Once the decisions were made, and after the names of the school site and the individuals participating in the RTP^3 were released, emails were sent to request interview dates. Interviews were finalized with the assistance of the principal, and three resident teacher interviews were able to be completed in a single day. Two others were scheduled for later dates. In one case, the researcher made four attempts to make contact with a resident teacher, had scheduled an interview, but the resident teacher had scheduling

conflicts and decided not to participate. All resident teacher interviews were conducted in person and on personal time.

The school site designees, the principal and Instructional Coach of Induction were also contacted via email. In one case, contacting the designee was difficult. After regularly sending emails every week for two months requesting an interview date with no response, the researcher requested a phone interview. That request was well received and scheduled for the following week. The school site designee was more than willing to complete a phone interview as well. Both school site designee interviews were completed on the phone and on personal time.

The school district designees were also sent emails requesting an interview. The date and time were mutually agreed upon by the designee and researcher. These interviews were completed within a week of the email sent and on the same day, in person, and on personal time.

The university designees were sent emails and responded promptly. Due to scheduling challenges, one requested a phone interview. One was in the geographic area of the researcher and met face to face. The other needed to schedule an appointment a week in advance due to scheduling issues but was willing to meet face to face.

Each of the interviews followed the same format. Each interviewee provided demographic information and signed an Informed Consent (Appendix D). Prior to the beginning the interview, permission was asked of the interviewee to allow recording, and each interviewee agreed. Thus, all interviews were recorded. The data and title of the study were read and then the questions were asked.

Once all interviews had been completed and recorded, the digital files were given to a third party to be transcribed. The transcription process took three weeks. The audio was then destroyed, and interviews were coded by the transcribed. The interviewees were assigned an alphanumeric code ensuring anonymity.

Quantitative

After the initial meeting with the representative from PEER, decisions were made regarding participants. Once the Spring 2014 semester was over and all observations had been completed, the researcher asked for the completed copies of the Internship Assessment Summary Sheet. The intern coordinator provided two. The other three were acquired during the summer of 2014 through PEER and the RTP^3 staff. Once received, the individual evaluations pertaining to the study were extracted, and names were removed. The rest of the evaluations were deleted.

Data Analysis

Data were analyzed differently for each of the methodologies, as this was a mixed methods study. Qualitative and quantitative are described separately.

Qualitative

The qualitative data were analyzed for reoccurring themes, as well as similarities and differences. Transcripts were coded using the constant comparative method as described by Fram (2013). The 12 interviews were conducted and recorded. To gather data, the interviews were transcribed word for word by a third party, and the digital audio

was deleted. The interviews were then compared to other interviews with the same type of interviewee, with different groups of interviewees and within the same interview (Fram, 2013, p. 4). Reoccurring words and phrases were coded, and displayed in tabular form. The themes were compared to the available literature. The data were used to answer Research Questions 1, 2 and 3 (Table 1).

Quantitative

To answer Research Question 1, the Internship Assessment Summary Sheet for the resident teachers assigned to High School A were collected from RTP^3 staff. The Internship Assessment Summary Sheets were analyzed, and the mean scores in each of the FEAP elements were placed in a table. The responses were compared to the themes that were generated from analysis of the interviews to fully answer the research question as to the perception of resident teachers, university intern coordinators and school district partner designees of the effectiveness of the two-semester, job-embedded internship for preparing STEM graduates to be effective mathematics and science teachers in the target high school

Summary

The methods and procedures used to conduct this mixed methods case study have been described in this chapter. The purpose of the study was restated, and the background of the case and the RTP^3 were briefly reviewed. The participants of the study were described, and demographic characteristics were displayed for all interviewees: resident teachers and school, school district, and university designees. The processes of collection for both

qualitative and quantitative data were outlined and explained in detail, including the instrumentation used to gather both types of data. The methods of analysis for both qualitative and quantitative data were also discussed as they related to the research questions and the tools used in the analyses. The results and analysis of the data are contained in Chapter 4.

CHAPTER 4
PRESENTATION AND ANALYSIS OF DATA

Introduction

The purpose of this study was to evaluate the perceptions of Resident Teacher Professional Preparation Program (RTP^3) participants as they relate to the effectiveness of the two-semester, job-embedded internship in an urban high school setting. The resident teachers participating in the program were interviewed face-to-face to fully understand their perspective. Additionally, stakeholders, including the school site, school district, and university personnel associated with the program were also interviewed. Following the conclusion of the interviews, the data from Internship Assessment Summary Sheets were analyzed to assess the perceptions of the resident teachers' effectiveness in regard to the Florida Educator Accomplished Practices (FEAPs) by the intern coordinator.

This chapter presents the results of the data analysis for the three research questions, which guided the study. Sources of data were the Designee Interview (Appendix B), Resident Teacher Interview (Appendix C) and the UCF Internship Assessment Summary Sheet (Appendix A). In the first section of this chapter, the background of the case study, including information on the RTP^3, the school district and the school site are briefly reviewed. The remainder of the chapter is devoted to responding to the research questions including the identification of themes from interview data and analysis of the FEAPs internship assessment data.

Background of the Case Study

Resident Teacher Professional Preparation Program (RTP^3)

In 2012, the University of Central Florida (UCF) received a grant for $10,265,473 from the Florida Department of Education for the Resident Teacher Professional Preparation Program (RTP^3). The RTP^3 was expected to run from August 1, 2011 to September 23, 2014. The grant was funded through Race To The Top (RTTT). RTTT required states to reform several areas within the educational process. One of these areas was in the development, recruitment, and retention of teachers by "recruiting, developing, rewarding, and retaining effective teachers and principals, especially where they are needed most" (PEER, 2014, p. 1).

To be awarded the grant, RTP^3 had two goals to develop the program. These goals involved a heavy focus on science, technology, engineering, and mathematics (STEM), and the preparation of teachers:

1. To raise mathematics and science achievement and career/college readiness of all Grade 6-12 students by increasing the effectiveness of teacher preparation programs to better prepare teacher candidates through job-embedded preparation
2. To improve and innovate teacher preparation content, delivery, and performance measures to increase the number of effective mathematics and science teachers who are eligible for employment. (PEER, 2014, p. 2)

To meet these goals, RTP^3 joined with five school districts in central Florida. One of the school districts included School District A, a large urban school district with over 180,000 students enrolled. In the 2012-2013 school year, 62% of the enrolled students were White, 29% were Black, 5% were Asian, 3% were multi-cultural, 1% were American Indian/Alaskan Native. Of the 62% white students, 35% were Hispanic and 65% were Non-Hispanic (Orange County Public Schools [OCPS], 2013, p. 15). Additionally, of the over 180,000 students in the 2013- 2014 school year, 58,870 students or 65.23% were served free and reduced lunch and 104 schools were serviced through Title I (OCPS, 2013). In School District A, there were 19 high schools and 35 middle schools.

To meet the goals, the RTP^3 needed to ensure that school district A would hire the students who were recruited into the program. In some cases, schools within the school district employed the students as tutors prior to the internship year. "School district partners budgeted funds to employ potential resident teachers as content tutors prior to employment as a resident teacher," (PEER, 2014, p. 14).

The recruitment process for students in the RTP^3 was very structured. Students needed to have a recent appropriate undergraduate degree and apply to the University of Central Florida's MAT program. This ruled out applicants by GRE score. Once accepted into the MAT program, the student could apply for the RTP^3 scholarship. Requirements for acceptance into the program were a GPA of 3.0 or better in the latter portion of undergraduate study and a STEM undergraduate degree based on high needs.

If accepted, the student needed to seek and attain employment as a classroom teacher with one of the partner school districts, (PEER, 2014).

Coursework for RTP^3 began the summer prior to the two-semester, job-embedded internship experince. RTP^3 students were expected to take four courses over the summer, two each six week semester. The first course, after the orientation, was Principals of Instruction and Classroom Management. This course focused on FEAPs relating to classroom organization, classroom management and planning instruction (Ellis, 2013). This course included a TeachLivE™ experince, in which, RTP^3 students would plan for, and present, a lesson to the simulated classroom allowing for application of content taught in the the course, (Ellis, 2013). Throughout the program RTP^3 students would complete an intense course load consisting 15 courses. Each course had components of instructional and pedegogical practice embedded within the course content (PEER, 2013).

Of the 76 students in the RTP^{3,} 37 or 49%, of them acquired employment in School District A. Of these 37 students, six or 16%, acquired employment in one urban, high needs high school, High School A. High School A employed the largest number of RTP^3 students in School District A or any other partner school district. As employees of High School A, the RTP^3 students became resident teachers, accepting full responsibility as a classroom teacher of record while being fully supported in a variety of ways.

Support for Resident Teachers

Each of the resident teachers at High School A were assigned a school site based mentor teacher. These mentor teachers were selected using criteria agreed upon by

partner school districts, as established by the RTP[3], and they were given stipends for their time. Each of the mentor teachers needed to "be a STEM teacher or STEM instructional coach in middle or high school science or mathematics, have evidence of successful teaching, 'be a positive role model', and model effective oral and written communication" (PEER, 2013, p. 24). Additionally it was suggested that the mentor have, "the same work location as resident teacher, completed clinical educator training, principal recommendation, three years of successful teaching experience, knowledge and experience with lesson study, mentor training and experience" (PEER, 2013, p. 24). The mentor had multiple responsibilities including communication with, observation of, and provision of feedback to the resident teachers.

In addition to a school site-based mentor, each resident teacher was assigned an intern coordinator. The university assigned the intern coordinator as part of the internship course. The intern coordinators came from a variety of backgrounds (e.g., former teachers and principals) and varying degrees including doctorates (PEER, 2014, p. 13 Intern coordinators were also responsible for communication with, observation of, and provision of feedback to the resident teachers. Additionally, the intern coordinators were responsible for evaluating the resident teacher as a part of the course grade.

Lesson Study

The resident teachers who were in their internships at High School A in School District A were also required to participate in Lesson Study. The Lesson Study was school district led, and the school district provided support for the activity. School

district designees were responsible for facilitating professional learning events for RTP[3] which "focused on the explanation of what lesson study is, how it can be used and facilitated, and how it should be implemented in various school districts" (PEER, 2014, p. 49). The school district designees had the opportunity to work with the resident teachers as well as with mentors in lesson study.

High School A Context

High School A is a large urban high school of approximately 2,800 students. It had three years of continual growth at the time of this study. According to the principal of High School A, the majority of the students were under performing:

> About 90% of them (students) come in reading at a level one or level two so they're reading below grade level. Right now 30% of our 10th graders are not passing the FCAT reading so that would mean our graduation rate really should be about 30%. (Principal, June 13, 2014)

The school was located in an urban portion of School District A. Ethnicity was represented as Black 49%, Hispanic 39%, and White non-Hispanic 7%. Of the students, 20% of them were English Language learners (ELL), and 72% of them are received free or reduced lunch.

High School A was a high needs school with students who struggled with a lack of health care and who may have participated in gang activity off campus. According to the principal, there has been a shift in focus within the school to academics and intensive intervention for learning.

> Teachers working at the school also have to recognize the need for relationship building. Many of our kids don't have a support system so our teachers have to be that support system for them. So when you work at (High School A) it's not just working in a high needs school. It's providing all these other relationships. (Principal, June 13 2014)

Parents were as involved as possible while maintaining work schedules and often lacking transportation. "The majority of our families really support the school and expect education to be a priority" (Principal, June 13, 2014). Parents may not be able to attend PTA meeting, but if needed, will often walk the few miles or take busses for academic conferences.

> If they need to take off work for a conference or if their child gets in trouble of course they'll be there. A lot of them to come to a parent conference they have to take a bus and walk a couple of miles to get there but they will do that. (Principal, June 13, 2014)

In addition to lack of transportation and the need to work, another struggle is attendance at school. Often students may need to stay home to attend to a sick sibling.

The teachers are under a unique type of pressure with the needs of the school. Teachers need to build solid relationships with students, while helping students perform on the state test.

> The teachers, a lot is put on them, lots of high pressure from pressure to perform, to perform on state tests, to perform because you have to change the educational

> path of these kids so we push, push, push. So its high stress on teachers. (Principal, June 13, 2014)

High School A is a unique school in an urban setting with unique needs. At the time of the study, the students, parents, teachers, and administrators were working toward changing the culture and climate of the school by focusing on educational achievement and persevering through the challenges that the students face daily.

Research Question 1

What is the perception of resident teachers, university intern coordinators and school district partner designees of the effectiveness of the two-semester, job-embedded internship for preparing STEM graduates to be effective mathematics and science teachers in the target high school?

Research Question 1 was addressed by examining the final scores for the resident teachers on the Florida Educator Accomplished Practices (FEAPs) in the Internship Summary Assessment (Appendix A). Additionally, responses to interview questions 2 and 5 in Appendices B and C, specifically, along with other statements made in the interviews, were analyzed. The responses were analyzed for common trends and themes to help establish the perception of effectiveness of the two-semester, job-embedded internship.

Quantitative Analysis

Intern coordinators used the Internship Assessment Summery Sheet to evaluate each individual's demonstration of the FEAPs. Possible ratings were exemplary, proficient, developing, or needs improvement. Intern coordinators were also to assign an overall rating of satisfactory or unsatisfactory. At the time of the final ratings, one resident teacher had moved to another school. There were six individual elements in FEAP 1A, which related to instructional design and lesson planning. One intern coordinator failed to rate a second resident teacher on the overall rating, leaving four resident teachers with a rubric score and three resident teachers with an overall score.

Intern coordinators rated four of the resident teachers as exemplary and three as satisfactory in each element, the highest scores possible. One resident teacher's intern

coordinator failed to submit an overall rating of either satisfactory or unsatisfactory. These scores indicated that overall the resident teachers were effective in the instructional design and lesson planning elements of the FEAPs. Table 4 contains the analysis of the intern coordinators' rating of the elements found in FEAPs relating to quality instruction focused on instructional design and lesson planning. Table 5 contains the analysis of the intern coordinators' overall rating on each of the elements found in FEAPs relating to quality instruction focused on instructional design and lesson planning.

Table 4

Resident Teachers' Rubric Scores: Internship Assessment Summary, 1A, Instructional Design and Lesson Planning (N = 4)

	Spring 2014 Rubric Score Final			
Element	Exemplary	Proficient	Developing	Needs Improvement
The effective educator consistently…				
a. Aligns instruction with state-adopted standards at the appropriate level of rigor.	4	0	0	0
b. Sequences lessons and concepts to ensure coherence and required prior knowledge.	4	0	0	0
c. Designs instruction for students to achieve mastery.	4	0	0	0
d. Selects appropriate formative assessments to monitor learning;	4	0	0	0
e. Uses diagnostic student data to plan lessons.	4	0	0	0
f. Develops learning experiences that require students to demonstrate a variety of applicable skills and competencies.	4	0	0	0

Note. At the time of the final ratings, one resident teacher had moved to another school.

Table 5

Resident Teachers' Overall Scores: Internship Assessment Summary, 1A, Instructional Design and Lesson Planning (N = 3)

	Spring 2014 Overall Score	
Element	Satisfactory	Unsatisfactory
The effective educator consistently…		
a. Aligns instruction with state-adopted standards at the appropriate level of rigor.	3	0
b. Sequences lessons and concepts to ensure coherence and required prior knowledge.	3	0
c. Designs instruction for students to achieve mastery.	3	0
d. Selects appropriate formative assessments to monitor learning;	3	0
e. Uses diagnostic student data to plan lessons.	3	0
f. Develops learning experiences that require students to demonstrate a variety of applicable skills and competencies.	3	0

Note. At the time of the final ratings, one resident teacher had moved to another school, and one intern coordinator failed to rate a second resident teacher on the overall rating.

The effective educator consistently maintains a student-centered learning environment that is safe, organized, equitable, flexible, inclusive, and collaborative. These elements were rated as exemplary, proficient, developing, or needs improvement. An overall rating of satisfactory or unsatisfactory was also assigned. There were nine individual elements in FEAP 2A. Intern coordinators rated three of the resident teachers as exemplary, one resident teacher as proficient, and three as satisfactory in element a (organizes, allocates, and manages the resources of time, space, and attention). Intern coordinators rated one resident teacher exemplary, three proficient, on element b (manages individual and class behaviors through a well-planned management system). The remaining seven elements were rated exemplary for all four resident teachers. The

intern coordinators perceived the majority of resident teachers to be less effective in classroom management, but the remaining elements presented as effective. Table 6 contains the intern coordinators' ratings of the elements found in FEAPs relating to quality instruction with an emphasis on the learning environment. All resident teachers who were rated earned an overall satisfactory on the nine elements of FEAP 2A. Table 7 contains the intern coordinators' overall rating on each of the elements found in FEAPs relating to quality instruction focused on instructional design and lesson planning.

Table 6

Resident Teachers' Rubric Scores: Internship Assessment Summary, 2A, The Learning Environment (N = 4)

	Spring 2014 Rubric Final Score			
Element	Exemplary	Proficient	Developing	Needs Improvement
The effective educator consistently…				
a. Organizes, allocates, and manages resources of time, space, and attention;	3	1	0	0
b. Manages individual and class behaviors through a well-planned management system;	1	3	0	0
c. Conveys high expectations to all students;	4	0	0	0
d. Respects students' cultural, linguistic and family background;	4	0	0	0
e. Models clear, acceptable oral and written communication skills;	4	0	0	0
f. Maintains a climate of openness, inquiry, fairness and support;	4	0	0	0
g. Integrates current information and communication technologies;	4	0	0	0
h. Adapts the learning environment to accommodate the differing needs and diversity of students;	4	0	0	0
i. Utilizes current and emerging assistive technologies that lets students participate in high-quality communication interactions/ achieve educational goals.	4	0	0	0

Note. At the time of the final ratings, one resident teacher had moved to another school.

Table 7

Resident Teachers' Overall Scores: Internship Assessment Summary, 2A, The Learning Environment (N = 3)

	Spring 2014 Overall Score	
Element	Satisfactory	Unsatisfactory
The effective educator consistently…		
a. Organizes, allocates, and manages the resources of time, space, and attention;	3	0
b. Manages individual and class behaviors through a well-planned management system;	3	0
c. Conveys high expectations to all students;	3	0
d. Respects students' cultural, linguistic and family background;	3	0
e. Models clear, acceptable oral and written communication skills;	3	0
f. Maintains a climate of openness, inquiry, fairness and support;	3	0
g. Integrates current information and communication technologies;	3	0
h. Adapts the learning environment to accommodate the differing needs and diversity of students;	3	0
i. Utilizes current and emerging assistive technologies that enable students to participate in high-quality communication interactions and achieve their educational goals.	3	0

Note. At the time of the final ratings, one resident teacher had moved to another school, and one intern coordinator failed to rate a second resident teacher on the overall rating.

The effective educator consistently utilizes a deep and comprehensive knowledge of the subject taught. These elements were rated as exemplary, proficient, developing, or needs improvement. An overall rating of satisfactory or unsatisfactory was also assigned. There were 10 individual elements in FEAP 3A. Intern coordinators rated three resident teachers as exemplary and one as proficient on element i (support, encourage, and provide immediate and specific feedback to students to promote student achievement).

For the remaining nine elements, four of the resident teachers were rated as exemplary and three as satisfactory. This indicated that overall the resident teachers were effective in the performance of these elements of the FEAPs. Table 8 contains the intern coordinators' ratings of the elements found in FEAPs relating to the quality of instruction focused on instructional delivery and facilitation. Table 9 contains the intern coordinators' ratings of the elements found in the FEAPs relating to instructional delivery and facilitation.

Table 8

Resident Teachers' Rubric Scores: Internship Assessment Summary, 3A, Instructional Delivery and Facilitation (N = 4)

	Spring 2014 Rubric Score Final			
Element	Exemplary	Proficient	Developing	Needs Improvement
The effective educator consistently…				
a. Delivers engaging and challenging lessons;	4	0	0	0
b. Deepens and enriches students' understanding through content area literacy strategies, verbalization of thought, and application of the subject matter;	4	0	0	0
c. Identifies gaps in students' subject matter knowledge;	4	0	0	0
d. Modifies instruction to respond to preconceptions or misconceptions;	4	0	0	0
e. Relates and integrates the subject matter with other disciplines and life experiences;	4	0	0	0
f. Employs higher-order questioning techniques;	4	0	0	0
g. Applies varied instructional strategies and resources, including appropriate technology, to provide comprehensible instruction, and to teach for student understanding;	4	0	0	0
h. Differentiates instruction based on an assessment of student learning needs and recognition of individual differences in students;	4	0	0	0
i. Supports, encourages, and provides immediate and specific feedback to students to promote student achievement; and	3	1	0	0
j. Utilizes student feedback to monitor instructional needs and to adjust instruction.	4	0	0	0

Note. At the time of the final ratings, one resident teacher had moved to another school.

Table 9

Resident Teachers' Overall Scores: Assessment Summary, 3A, Instructional Delivery and Facilitation (N = 3)

	Spring 2014 Overall Score	
Element	Satisfactory	Unsatisfactory
The effective educator consistently…		
a. Delivers engaging and challenging lessons;	3	0
b. Deepens and enriches students' understanding through content area literacy strategies, verbalization of thought, and application of the subject matter;	3	0
c. Identifies gaps in students' subject matter knowledge;	3	0
d. Modifies instruction to respond to preconceptions or misconceptions;	3	0
e. Relates and integrates the subject matter with other disciplines and life experiences;	3	0
f. Employs higher-order questioning techniques;	3	0
g. Applies varied instructional strategies and resources, including appropriate technology, to provide comprehensible instruction, and to teach for student understanding;	3	0
h. Differentiates instruction based on an assessment of student learning needs and recognition of individual differences in students;	3	0
i. Supports, encourages, and provides immediate and specific feedback to students to promote student achievement; and	3	0
j. Utilizes student feedback to monitor instructional needs and to adjust instruction.		

Note. At the time of the final ratings, one resident teacher had moved to another school, and one intern coordinator failed to rate a second resident teacher on the overall rating.

The effective educator should be able to use assessment to drive instruction. These elements were rated as exemplary, proficient, developing, or needs improvement. An overall rating of satisfactory or unsatisfactory was also assigned. There were six individual elements in FEAP 4A. Intern coordinators rated three resident teachers as

exemplary and one as proficient on element e (shares the importance and outcomes of student assessment data with the student and the student's parent/caregiver(s)). All four resident teachers were rated exemplary in each remaining five elements, indicating that overall the resident teachers were effective on these elements of the FEAPs. Table 10 contains the intern coordinators' ratings of the elements found in FEAPs for assessment. Intern coordinators assigned satisfactory ratings to all resident teachers scored for the elements in FEAP 4A. Table 11 presents the overall scores on the elements in FEAP 4A.

Table 10

Resident Teachers' Rubric Scores: Internship Assessment Summary, 4A, Assessment (N = 4)

	Spring 2014 Rubric Score Final			
Element	Exemplary	Proficient	Developing	Needs Improvement
The effective educator consistently…				
a. Analyzes and applies data from multiple assessments and measures to diagnose students' learning needs, informs instruction and drives the learning process;	4	0	0	0
b. Designs and aligns formative and summative assessments that match learning objectives/lead to mastery;	4	0	0	0
c. Uses a variety of assessment tools to monitor student progress, achievement and learning gains;	4	0	0	0
d. Modifies assessments and testing conditions to accommodate learning styles and levels of knowledge;	4	0	0	0
e. Shares the importance and outcomes of student assessment data with the student and the student's parent/caregiver(s); and	3	1	0	0
f. Applies technology to organize and integrate assessment information.	4	0	0	0

Note. At the time of the final ratings, one resident teacher had moved to another school.

Table 11

Resident Teachers' Overall Scores: Internship Assessment Summary, 4A, Assessment (N = 3)

Element	Spring 2014 Overall Score	
	Satisfactory	Unsatisfactory
The effective educator consistently…		
a. Analyzes and applies data from multiple assessments and measures to diagnose students' learning needs, informs instruction based on those needs, and drives the learning process;	3	0
b. Designs and aligns formative and summative assessments that match learning objectives and lead to mastery;	3	0
c. Uses a variety of assessment tools to monitor student progress, achievement and learning gains;	3	0
d. Modifies assessments and testing conditions to accommodate learning styles and varying levels of knowledge;	3	0
e. Shares the importance and outcomes of student assessment data with the student and the student's parent/caregiver(s); and	3	0
f. Applies technology to organize and integrate assessment information.		

Note. At the time of the final ratings, one resident teacher had moved to another school, and one intern coordinator failed to rate a second resident teacher on the overall rating.

The effective educator strives for continuous professional improvement. These elements were rated as exemplary, proficient, developing, or needs improvement. An overall rating of satisfactory or unsatisfactory was also assigned. There were five individual elements in FEAP 1B. Intern coordinators rated four of the resident teachers as exemplary and three as satisfactory on each element. One intern coordinator failed to assign an overall score. These ratings indicated that overall resident teachers were considered to be effective on these elements of the FEAPs. Table 12 contains the intern

coordinators' ratings of the FEAPs elements related to continuous improvement, responsibility and ethics focused on continuous professional improvement. Table 13 contains the analysis of the intern coordinators' overall ratings of the elements in FEAP 1B.

Table 12

Resident Teachers' Rubric Scores: Internship Assessment Summary, 1B, Continuous Professional Improvement (N = 4)

	Spring 2014 Rubric Score Final			
Element	Exemplary	Proficient	Developing	Needs Improvement
The effective educator consistently…				
a. Designs purposeful professional goals to strengthen the effectiveness of instruction based on students' needs; b. Examines and uses data-informed research to improve instruction and student achievement;	4	0	0	0
c. Uses a variety of data, independently, and in collaboration with colleagues, to evaluate learning outcomes, adjust planning and continuously improve the effectiveness of the lessons;	4	0	0	0
d. Collaborates with the home, school and larger communities to foster communication and to support student learning and continuous improvement;	4	0	0	0
e. Engages in targeted professional growth opportunities and reflective practices, both independently and in collaboration with colleagues; and	4	0	0	0
f. Implements knowledge and skills learned in professional development in the teaching and learning process.	4	0	0	0

Note. At the time of the final ratings, one resident teacher had moved to another school.

Table 13

Resident Teachers' Overall Scores: Internship Assessment Summary, 1B, Continuous Professional Improvement (N = 3)

Element	Spring 2014 Overall Score	
	Satisfactory	Unsatisfactory
The effective educator consistently…		
a. Designs purposeful professional goals to strengthen the effectiveness of instruction based on students' needs; b. Examines and uses data-informed research to improve instruction and student achievement;	3	0
c. Uses a variety of data, independently, and in collaboration with colleagues, to evaluate learning outcomes, adjust planning and continuously improve the effectiveness of the lessons;	3	0
d. Collaborates with the home, school and larger communities to foster communication and to support student learning and continuous improvement;	3	0
e. Engages in targeted professional growth opportunities and reflective practices, both independently and in collaboration with colleagues; and	3	0
f. Implements knowledge and skills learned in professional development in the teaching and learning process.	3	0

Note. At the time of the final ratings, one resident teacher had moved to another school, and one intern coordinator failed to rate a second resident teacher on the overall rating.

Understanding that educators are held to a high moral standard in the community, an effective educator adheres to the Code of Ethics and the Principles of Professional Conduct of the Education Profession of Florida, pursuant to State Board of Education Rules 6B-1.001 and 6B1.006, F.A.C. These elements were rated as exemplary, proficient, developing, or needs improvement. An overall rating of satisfactory or unsatisfactory was also assigned. There were six individual elements in FEAP 2B. Intern coordinators rated four of the resident teachers as exemplary and three as

satisfactory on each element. One intern coordinator failed to assign an overall rating. These ratings indicated that overall resident teachers were effective on these elements of the FEAPs. Table 14 contains the intern coordinators' ratings of the elements found in the FEAPs related to continuous improvement, responsibility and ethics focused on professional responsibility and ethical conduct. Table 15 contains the overall ratings assigned to resident teachers by intern coordinators in each of the elements in FEAP 2B.

Table 14

Resident Teachers' Rubric Scores: Internship Assessment Summary, 2B, Professional Responsibility and Ethical Conduct (N = 4)

	Spring 2014 Rubric Score Final			
Element	Exemplary	Proficient	Developing	Needs Improvement
The effective educator consistently…				
UCF D8. Maintains high academic standards for all learners.	4	0	0	0
UCF D1. Believes all students can learn.	4	0	0	0
UCF D3, D5, D6. Demonstrates fairness and equity; promotes social justice and democracy.	4	0	0	0
UCF D4. Values diversity.	4	0	0	0
2A. Meets deadlines, punctual, exhibit regular attendance.	4	0	0	0
2B. Works well with others; accepts feedback and constructive criticism; is a reflective practitioner	4	0	0	0

Note. At the time of the final ratings, one resident teacher had moved to another school.

Table 15

Resident Teachers' Overall Scores: Internship Assessment Summary, 2B, Professional Responsibility and Ethical Conduct (N = 3)

Element	Spring 2014 Overall Score	
	Satisfactory	Unsatisfactory
The effective educator consistently…		
UCF D8. Maintains high academic standards for all learners.	3	0
UCF D1. Believes all students can learn.	3	0
UCF D3, D5, D6. Demonstrates fairness and equity; promotes social justice and democracy.	3	0
UCF D4. Values diversity.	3	0
2A. Meets deadlines, punctual, exhibit regular attendance.	3	0

Note. At the time of the final ratings, one resident teacher had moved to another school, and one intern coordinator failed to rate a second resident

In general, the intern coordinators thought that the resident teachers were performing at exemplary and satisfactory levels. The scores indicated that the intern coordinators perceived the resident teachers to be effective in the craft of teaching. The exception was in FEAPs 2A, manages individual and class behaviors through a well-planned management system. Although the resident teachers were not rated below proficient, classroom management was an area that emerged as an area of focus.

Qualitative Analysis

Through the analysis of interviews, the perceptions of both the designees and the resident teachers were examined. Five resident teachers responded. Though it was stated that resident teachers had a difficult time comparing, it was agreed that other first-year

teachers had a lot to offer in the way of content and ideas. There were some conflicting thoughts on the methods of dealing with classroom management. One resident teacher stated that first-year teachers might have been more effective in dealing with students where as another resident teacher stated that first-year teachers tended to get more frustrated with students. As a whole, the resident teachers believed that due to RTP^3 they were more effective than first-year teachers not in the program. One resident teacher said, “I think we're more effective at managing our classroom compared to those who haven't gone through this program” (RT2, May 27, 2014), and another resident teacher said, “I would say that if I were to be a first-year teacher without this program, I'd know I'd be much less effective” (RT3, May 27, 2014). Table 16 contains sample quotations from the resident teachers’ interview responses comparing their effectiveness to that of other first-year teachers.

Table 16

Resident Teachers' Self-Perceived Effectiveness Compared to Other First-Year Teachers (N = 5)

Resident Teachers	Sample Quotations
RT1	I've seen teachers with educational backgrounds first year who come in and I'm stealing ideas from them [first-year teachers].
RT2	I don't really see a difference in content. I think we're more effective at managing our classroom compared to those who haven't gone through this program. I've noticed, they [first-year teachers] tend to get more frustrated with their students.
RT3	I would say that if I were to be a first-year teacher without this program, I'd know I'd be much less effective. There are definitely other teachers who had zero educational experience beforehand who are amazing teachers but that has more to do with their inherent personality than I think it has to do with their preparation program.
RT4	I was rated highly effective and I feel like I did a really good job because of the RTP^3.
RT5	I think they [First-year teachers] probably were more effective in knowing how to deal with students.

The designees' interviews were examined separately. Six of the designees responded. In analyzing responses related to the comparison of the designees' perceived effectiveness of resident teachers to that of first-year teachers, resident teachers believed they were more effective because of components of RTP^3. The components included the additional support, resources, focus on routines, and lesson study as well as intense focus on pedagogy early in the course work. It was believed that the extra support helped them to be focused on ensuring that the resident teachers performed well. Specific examples

were given of awards that resident teachers had earned for their quality work in the internship: "There were so many of them [resident teachers] that had been rookie teacher of the year at their school. A couple of them were up for rookie teacher in their districts. Several of them have been teachers of the month" (UD1, June 18, 2014). The designees believed the resident teachers were better equipped due to knowledge of the evaluation and routines: "They [resident teachers] were already familiar with the evaluation system. They were already familiar with routines" (SD1, June 12, 2014). The designees thought the resident teachers' understanding of lesson study, as well as their understanding of ethics and legal issues, helped make them more effective than other first-year teachers: "Resident teachers were more equipped because they understood components of lesson study before the school year began. They understood about ethics and safety and legal issues before the school year began" (UD3, July 11, 2014). One designee did mention that resident teachers had a heavier work load than other first-year teachers due to the amount of work that was expected from them: "I think compared to other first-year teachers they probably have it a lot harder" (SS1, June13, 2014). Table 17 contains sample quotations from the designees regarding their perceptions of the effectiveness of resident teachers compared to other first-year teachers.

Table 17

Designees' Perceived Effectiveness of Resident Teachers Compared to Other First-Year Teachers (N = 6)

Designee	Sample Quotations
SD1	They [resident teachers] were already familiar with the evaluation system. They were already familiar with routines.
	They [resident teachers] had a lot of the relationships, a lot of the support, a lot of the background knowledge They also came with lots of resources.
UD1	There were so many of them [resident teachers] that had been rookie teacher of the year at their school. A couple of them were up for rookie teacher of their districts. Several of them have been teachers of the month.
	They [resident teachers] had just exhibited great skills. The rehires, the word "rock star" was used by a couple of the principals for their teachers at their particular schools.
UD2	They [resident teachers] definitely are getting a lot of the pedagogy.
UD3	Resident teachers were more equipped because they understood components of lesson study before the school year began. They understood about ethics and safety and legal issues before the school year began. They had some experience working with kids and getting paid for it before the school year began.
	They had much more support than the typical first-year teacher gets.
SS1	I think compared to other first-year teachers they probably have it a lot harder.
SS2	They [resident teachers] are much stronger. I think it's because they have the support but also there are more people monitoring them.
	The first-year teachers sometimes it's not a good career choice and they are not rehired so we do rehire all of these. They're [resident teachers] stronger in the classroom.
	There's more people expecting them [resident teachers to perform but they tend to be more focused.

As established in Chapter 2, one key factor in determining effectiveness is the impact of the teacher on student learning. Impact on student learning is especially relevant in an urban high school with high needs students. The RTTT grant was focused

very much on the content background, and RTP^3 selected individuals to participate in the program who had extensive content knowledge. There were 10 individuals who had responses related to the theme of impact on student learning. Subthemes were in two areas: content and pedagogy.

There were seven responses mentioning pedagogy as having an impact on student learning. Four resident teachers and three of designees stated that pedagogy had an impact on student learning. Most respondents stated that although resident teachers came equipped with solid content knowledge, without the pedagogy students were unable to be reached in the best way: "Without the pedagogy, the content expertise would be worthless" (RT3, May 27, 2014). One designee stated, "I've had some that were excellent in their content knowledge, but they didn't want to improve their pedagogy and it killed them and it was horrible for them" (SS1, June 13, 2014). Another designee stated that knowledge of the content was important, but without pedagogy, content is difficult for students to understand: "If they know their content, then they understand their content, but they [resident teacher] might not be able to deliver it to students" (SS2, June 13, 2014).

Six respondents mentioned content as being an impacting factor on student learning: three resident teachers and three designees stated that content had an impact on student learning. The responses indicated that the impact was on the ability to add relevance, confidence and something special to the lessons. Additionally, the resident teachers were better able to talk about teaching strategies in lesson study sessions and meetings, because understanding content and standards was not a struggle. One of the

resident teachers stated, “I know ways to relate and make the content relevant and to incorporate real world experience” (RT2, May 27, 2014). The same resident teacher also said, “For high achievers, my content knowledge is really interesting and engaging” (RT2, June 9, 2014). One of the designees stated that because of the excellent understanding of the content of the resident teachers, more of a focus was able to be placed on practices such as lesson study: “We're not having to teach the standards and the content in our PLC time where we can truly talk about the lesson study process” (SS2, June 13, 2014).

Two of the resident teachers and two of designees’ responses fell in both categories, placing equal importance on pedagogy and content. Table 18 displays both resident teachers’ and designees’ sample quotations of their perceptions as to whether pedagogy or content had the greatest impact on student learning.

Table 18

Perceptions of Resident Teachers' Impact on Student Learning (N = 10)

Theme (n)	Alphanumeric Code	Sample Quotations
Pedagogy (7)	RT2	Without the pedagogy, the content expertise would be worthless.
	RT3	With the pedagogical expertise you're going in and you feel more confident
	RT4	Without the pedagogy experience I would not be able to provide for them what I did.
	RT5	Pedagogical, If I'm unable to get the classroom as a whole to be attentive then it doesn't matter.
	UD3	I think it's the pedagogy that's most important.
	SS1	I've had some that were excellent in their content knowledge but they didn't want to improve their pedagogy and it killed them and it was horrible for them.
	SS2	The pedagogy because if they know their content, then they understand their content but they might not be able to deliver it to students
Content (6)	RT2	What has made our classrooms special has been the content knowledge.
		I know ways to relate and make the content relevant and to incorporate real world experience.
	RT3	I think coming in with the content knowledge you kind of have that confidence that you know what you're talking about.
	RT4	For high achievers my content knowledge is really interesting and engaging.
	SD1	I think them coming in with the deeper content knowledge from the very beginning helps them be in a better place.
	UD1	Their content knowledge was really good and I've said that before because they were in the math or science.
	SS2	We're not having to teach the standards and the content in our PLC time where we can truly talk about the lesson study process.

Although four respondents thought that both pedagogy and content had equal impact on student learning, two indicated the content had a greater impact; and four indicated that pedagogy had a greater impact. RTP^3 selected candidates that had rich content knowledge and added course work that focused heavily on pedagogy, addressing both of these areas and increasing the effectiveness of the resident teacher.

In order to establish the effectiveness of the two-semester, job-embedded internship model, respondents were queried as to their perceptions of the effectiveness of the two-semester, job-embedded internship model vs. a one-semester internship model. Three resident teachers responded. Respondents believed that the two-semester, job-embedded internship was able to provide involvement with the experience from start to finish. Resident teachers were able to see more and have a hand in every aspect.

> The fact it's completely embedded means there's no aspect that you are not by the end of the year at least associated with. You understand elements of classroom management, assessment, instruction, evaluating student work. Every component of teaching is embedded. (RT1, May 27, 2014)

One resident teacher thought that the one-semester internship was more effective because it gave participants experience prior to being completely responsible for a class: "I do think it would have been better maybe if I'd had some experience beforehand" (RT5, June 16, 2014). Table 19 provides sample quotations showing the resident teachers' perceptions of the effectiveness of the two-semester job-embedded internship compared to the one-semester internship.

Table 19

Resident Teachers' Comparison of Effectiveness of Two-Semester, Job-Embedded Internships vs. One-Semester Internships (N = 3)

Resident Teachers	Sample Quotations
RT1	The fact it's completely embedded means there's no aspect that you are not by the end of the year at least associated with. You understand elements of classroom management, assessment, instruction, evaluating student work. Every component of teaching is embedded People in the one semester one don't usually get to be there at the very first week and see what happens that very first week. It's a challenge but it helps you a lot in the long-run.
RT2	I think our internship would be incomparably more effective than a one-semester internship where you're in there with another teacher. There's so much more that happens that you can't see in one semester and you can't see if someone else is helping you do it.
RT5	I did have to be flexible. I had to learn on my own to some extent. I do think it would have been better maybe if I'd had some experience beforehand.

Seven of the designees responded when asked about their perceptions of the effectiveness between the two-semester, job-embedded internship. The majority of the designees stated that the two-semester internship provided more time in the classroom and that resident teachers were able to design the experience from the ground up: "The one semester experience is a limited experience. The job-embedded internship since it's a yearlong I think it gives candidates more time to grow" (UD3, July 11, 2014). Designees agreed that the one-semester internship relies heavily on teachers establishing routines, experiences and observations: "In the RTP3 program you're designing everything from scratch" (UD3, July 11, 2014). Table 20 provides sample quotations on

the designees' perceptions of the effectiveness of the two-semester job embedded internship vs. the one-semester internship.

Table 20

Designees' Comparison of the Effectiveness of Two-Semester, Job-Embedded Internships vs. One-Semester Internships (N = 7)

Designee	Sample Quotations
SD1	The only difference was they [resident teachers] had more time.
SD2	Just doing the full year gives you the big picture.
UD1	The one semester internship is experiential thing and the supervising teacher directs that. The two semester internship is an on the job training kind of thing.
UD2	When you have the one semester you're in there and you observe the teacher and you are modeling after the teacher so there's a lot of preconceived set-ups. The teacher has already established the rules, already established the format, already established a lot, and then the intern comes in and just basically continuing what the teacher started.
UD3	In the RTP3 program you're designing everything from scratch The one semester experience is a limited experience. The job-embedded internship since it's a yearlong I think it gives candidates more time to grow and rather than to have all of the indicators under the Florida Educator Accomplished Practices have to be demonstrated in 15 weeks, they get 30 weeks to do that which is a lot more time to develop as a teacher.
SS1	The [one-semester] interns do everything their supervising teacher does so they can have the best experience. They don't come to us with strategies whereas someone who's done a one-semester internship has been in the classroom with the support of a supervising teacher.
SS2	I would say the one-semester teachers coming and learning, getting the luck of the draw of what teacher and where they were placed but they don't truly own that classroom so they are participating.

In general both the resident teachers and the designees agree that the two-semester, job-embedded internship provided more experiences and ownership then the

one-semester internship. Those interviewed perceived that the two-semester, job-embedded internship experience was more effective than the one-semester internship at preparing the resident teacher to effectively teach students.

Research Question 2

What do resident teachers; university intern coordinators and school district partner designees perceive to be the strengths and weaknesses of the two-semester, job-embedded internship in preparing them to be effective mathematics and science teachers?

Strengths

To answer Research Question 2, interviews were conducted and collected data were analyzed to find themes focused on both strengths and weaknesses of the two-semester, job-embedded internship model in preparing resident teachers to be effective STEM teachers. Several themes were identified in both areas; sample quotations were used in both areas to further demonstrate the perception of strengths and weaknesses. Tables 21-26 focus on the strengths of the two-semester, job-embedded internship, and Tables 27-29 concentrate on the weaknesses of the two-semester, job-embedded internship.

Support

During the interviews, 12 of the respondents spoke about the strengths of the two-semester job-embedded internship. Six of the respondents, four of the resident teachers and two of the designees, stated that one of the strengths of the two-semester model was the level of support that the resident teachers had. While completing the two-semester,

job-embedded internship in High School A, resident teachers had access to school site support through mentor teachers and the induction coach: "My mentor was very helpful in things like classroom management and how to implement certain things in my classroom" (RT2, May 27, 2014). Resident teachers were able to work with an intern coordinator and several professors at the University of Central Florida: the "Intern coordinator was extremely helpful; she was able to give me resources" (RT4, June 9, 2014). School district designees in the area of lesson study also supported resident teachers. During the interviews, the resident teachers conveyed that there was a feeling of support and that people were willing to help: "I feel like everybody there was very supportive and everybody wanted to help us" (RT4, June 9, 2014). Several resident teachers mentioned both the intern coordinator and the mentor. The designees focused on the level of support, indicating that first-year teachers (other than resident teachers) did not receive the same level of support: "Normally that [reflective support] doesn't happen because people are too busy doing their jobs to really support new people" (UD2, June 13, 2014). "When you can have two or three people providing the support as well as a university philosophy that is still mirroring that same support vision, that's what makes it strong" (SS2, June 13, 2014). Multiple respondents believed that the overall the support was a driving factor in the success of the resident teachers. Table 21 presents the strengths and the various subthemes discussed.

Table 21

Support Theme: Strengths of the Two-Semester, Job-Embedded Internship (N = 12)

Theme	Code	Sample Quotations
Support (6)	RT1	My mentor was very helpful in things like classroom management and how to implement certain things in my classroom.
	RT2	My mentor supported me from the get-go with syllabus, whatever I needed. I found it [intern coordinator] to be incredibly helpful, very supportive, easy to contact.
	RT4	Intern coordinator was extremely helpful; she was able to give me resources.
	RT5	I feel like everybody there was very supportive and everybody wanted to help us.
	UD2	The mentors and the UCF coursework, the professors there who had discussions ahead of time knowing they were going to run into these issues and so had prepared a lot ahead of time Normally that [reflective support] doesn't happen because people are too busy doing their jobs to really support new people.
	SS2	They [resident teachers] were receiving all the support that our new teachers received at a school plus extra outside support. All the support that has been poured into their success in the classroom from classroom management. When you can have two or three people providing the support as well as a university philosophy that is still mirroring that same support vision, that's what makes it strong.

Feedback

During the interviews, five of the respondents stated that feedback was one strength of the two-semester, job-embedded internship; two of the resident teachers and three of the designees commented on feedback. The resident teachers mentioned both the mentor and intern coordinator, stating that the specific, positive feedback was targeted to

the school environment: “The feedback was targeted specific to his understanding of what we were going through, and it added a lot of accuracy to what he was saying” (RT2, May 27, 2014). Resident teachers also said feedback has added to their strengths as teachers and helped them feel more confident in the classroom: “The feedback was very positive, specific, definitely built up your strengths” (RT3, May 27, 2014). The feedback also gave resident teachers areas of focus during instructional presentation: “I found just knowing I had an observation kept me in the mindset of thinking about best practices, thinking about what I needed to do” (RT3, May 27, 2014). The designees said extra feedback was important to helping the resident teachers grow: “I really believe in extra feedback to where the teachers can grow” (SS2, June 13, 2014). The designees believed the resident teachers were receptive to feedback in all areas, including classroom management and in making changes were needed: “I've had some that are very open to feedback and will implement the strategies that we recommend so that they can be successful in the instruction and in the classroom management” (SS1, June 13, 2014). Table 22 contains sample quotations on feedback as a strength.

Table 22

Feedback Theme: Strengths of the Two-Semester, Job-Embedded Internship (N = 12)

Theme (n)	Interviewee	Sample Quotations
Feedback (5)	RT2	We had a great intern coordinator providing specific feedback being that he was able to be there when you needed him and with his feedback being so specific you were able to go and make that change.
		The feedback was targeted specific to his understanding of what we were going through, and it added a lot of accuracy to what he was saying.
	RT3	I found just knowing I had an observation kept me in the mindset of thinking about best practices, thinking about what I needed to do.
		The feedback was very positive, specific, definitely built up your strengths
	UD2	For any learner, the more immediate the feedback is, the more precise the feedback is, and looking to how to change using feedback is crucial.
	SS1	I've had some that are very open to feedback and will implement the strategies that we recommend so that they can be successful in the instruction and in the classroom management
	SS2	I really believe in extra feedback to where the teachers can grow

Intern Coordinator

Of the 12 interviewees, three (two resident teachers and one designee) mentioned that one of the strengths of the two-semester, job-embedded internship was the availability of the intern coordinator. The resident teachers believed that the intern coordinator was very flexible and understood their needs as well as the needs of the students: "Having very flexible guidelines and someone who is as professional as our intern coordinator was to understand that there needs to be quite a bit of give and take with that is crucial" (RT3, May 27, 2014). The designee believed that the coaching

provided to the resident teacher provided a better foundation that resulted in better teaching: “I think the experiences we provided in coaching from their mentor at the school site and from the college coordinator seemed to provide a better foundation that produced better results and better teaching” (UD1, June 18, 2014). Table 23 contains sample quotations related to the intern coordinator as a strength

Table 23

Intern Coordinator Theme: Strengths of the Two-Semester, Job-Embedded Internship (N = 12)

Theme (n)	Interviewee	Sample Quotations
Intern coordinator (3)	RT2	Having very flexible guidelines and someone who is as professional as our intern coordinator was to understand that there needs to be quite a bit of give and take with that is crucial.
	RT3	I don't know how the other coordinators were but I think I had the greatest coordinator so I think they could use him as a model or use his expertise to spread to the other coordinators.
	UD1	I think the experiences we provided in coaching from their mentor at the school site and from the college coordinator seemed to provide a better foundation that produced better results and better teaching.

Collaboration with Stakeholders

Collaboration between the university, School District A, and High School A was a strength of the two-semester, job-embedded internship according to two of the designees. Table 24 includes sample quotations that relate to collaboration as a strength. The designees believed that because of collaboration with stakeholders, everyone was able to take ownership in an aspect of the internship process and everyone had responsibilities in

reporting, meeting, and supervising the resident teachers: “These experiences were co-constructed with the districts, and the districts took a key role in supervising these experiences through coursework, through mentoring, through constant collaboration and communication with the university” (UD3, July 11,2014). Table 24 includes sample quotations that relate to collaboration with stakeholders as a strength.

Table 24

Collaboration With Stakeholders Theme: Strengths of the Two-Semester, Job-Embedded Internship (N = 2)

Theme (N)	Interviewee	Sample Quotations
Collaboration with Stakeholders (2)	UD3	These experiences were co-constructed with the districts and the districts took a key role in supervising these experiences through coursework, through mentoring, through constant collaboration and communication with the university.
	SD1	I think what worked really well was the close collaboration with the college. We would have monthly advisory meetings and it was shared work so it wasn't just one person reporting out. All of us had responsibilities. Everybody had skin in the game

Embedded Experience

Another strength that was noted during the interviews was the embedded experience model. Three resident teachers enjoyed the fully embedded experience. Their perceptions were that the model gave a broader understanding of the elements of classroom teaching, including classroom management, and instruction: “The fact it’s completely embedded means there's no aspect that you are not by the end of the year at least associated with. You understand elements of classroom management, assessment,

instruction, evaluating student work" (RT3, May 27,2014). The designees believed that the experience allowed them to test an idea in a safe environment: "Here they can take an idea, immediately implement it and then make decisions about whether it worked" (UD2, June13, 2014).

The designees also commented on various aspects of the experience as being strengths. One was lesson study: "One thing I liked about the program is the lesson study because we're looking at a lesson, not the teacher but the lesson" (UD2, June 13,2014). Alignment of the curriculum to the experience was also viewed as a strength: "Things are lined up and connected so instead of things being done kind of piecemeal, there's a design to it. There's a system to it" SD1, June 12,2014). The common expectations set for the resident teachers was the final stated general strength: "The strengths of the program are common expectations, common course texts" (UD3, July 11, 2014). Table 25 contains sample quotations regarding the embedded experience as a strength along with general strengths of the two-semester, job-embedded internship program.

Table 25

Embedded Experience Theme: Strengths of the Two-Semester, Job-Embedded Internship (N = 12)

Theme (n)	Interviewee	Sample Quotations
Embedded Experience (3)	RT3	The fact it's completely embedded means there's no aspect that you are not by the end of the year at least associated with. You understand elements of classroom management, assessment, instruction, evaluating student work.
		This has been one of the most profound experiences of my life.
	UD2	Here they can take an idea, immediately implement it and then make decisions about whether it worked.
		One thing I liked about the program is the lesson study because we're looking at a lesson, not the teacher but the lesson.
	SS1	It gives them on the job training that's going to allow them to get their degree and it's going to push them in the direction of a professional certification

System

Another strength noted by two respondents was the system of the two-semester job-embedded internship. This included alignment of the curriculum to the experience: "Things are lined up and connected, so instead of things being done kind of piecemeal, there's a design to it. There's a system to it" SD1, June 12,2014). The common expectations set for the resident teachers was the final stated general strength: "The strengths of the program are common expectations, common course texts" (UD3, July 11, 2014). Table 26 contains sample quotations relating to the systematic nature of the two-semester job-embedded internship.

Table 26

System Theme: Strengths of the Two-Semester, Job-Embedded Internship (N = 2)

Theme (n)	Interviewee	Sample Quotations
Systems of the Two-Semester, Job-Embedded Internship (2)	UD3	The strengths of the program are common expectations, common course texts.
	SD1	Things are lined up and connected so instead of things being done kind of piecemeal, there's a design to it. There's a system to it.

Weaknesses

Of the 12 individuals interviewed, 12 of them identified areas of weakness in the two-semester, job-embedded internship. Weaknesses were identified in three different areas and sample quotations were used to further clarify the perceptions of the participants.

Classroom Management

One of the weaknesses identified was classroom management. Of the respondents, 11 (five resident teachers and six designees) mentioned classroom management as a weakness. Resident teachers mentioned that classroom management is something that needs to be experienced: "The classroom management one is completely something that you cannot know until you experience" (RT1, May 27,2014). Resident teachers themselves had difficulty working with and handling students: "The actual teaching part and classroom management, dealing with students that was something I was really struggling with" (RT5, June 16, 2014).

Like the resident teachers, the designees believed that the resident teachers did not have the proper experience in classroom management and that they had a tendency to blame students instead of reflecting on their skills in classroom management: “They want to blame the students rather than take the responsibility themselves for setting up rules and procedures” (SS1, June13, 2014). Designees believed that classroom management was an area in which resident teachers needed more support. Table 27 contains sample quotations regarding classroom management as a weakness of the two-semester job-embedded internship.

Table 27

Classroom Management Theme: Weaknesses Within the Two-Semester, Job-Embedded Internship (N = 12)

Theme (n)	Interviewee	Sample Quotations
Classroom Management (11)	RT2	The classroom management one is completely something that you cannot know until you experience.
		The very qualitative aspects of classroom management, handling random situations that pop up that you could never expect
	RT1	I still need to work on that classroom management aspect.
	RT5	I had a lot of problems with classroom management, organization, time management, all that.
		The actual teaching part and classroom management, dealing with students that was something I was really struggling with.
	UD1	I think the things they still need to work on, of course, are classroom management and motivation of learners. That's been the two. Both years I've been part of this program that has been the two stumbling blocks that have been the hardest to overcome and the resident teachers themselves have brought that up
	UD3	Their number one area to improve upon is classroom management
	SS1	They don't have the classroom management experience or the background.
		They want to blame the students rather than take the responsibility themselves for setting up rules and procedures.
	SS2	I would say one we're going to try to work and get some more support with classroom management.

Student Demographics

One of the weaknesses mentioned in the interviews was related to demographic issues associated with a high needs Title I school. Of the 12 interviewees, eight (five resident teachers and three designees) stated that one of the weaknesses was in the area of

student demographics. The resident teachers spoke about working with the different populations. The designees perceived that the resident teachers were not prepared for teaching students with different backgrounds and learning styles:

> For some of our teachers, that was a cultural shock in itself, so they had to get over the fact that not everybody learns the way they do. They had to be more open to that part of their job is motivation. (UD2, June 13, 2014)

The high needs and demographics of the school often translated to classroom management problems due to lack of training,

> Being at a large urban high school with a high level of poverty, many of them are not prepared for that. They expect students to come in and sit down and be prepared and get started right away and do everything that the teacher asks them to do, and the reality of it is our kids often don't do that. (SS2, June 13, 2014)

Table 28 contains sample quotations related to student demographics.

Table 28

Student Demographic Theme: Weaknesses Within the Two-Semester, Job-Embedded Internship (N = 12)

Theme (N)	Interviewee Alphanumeric Code	Sample Quotations
Demographic Issues (8)	RT1	Just dealing with different types of people, different students. It's been very interesting.
	UD2	For some of our teachers that was a cultural shock in itself so they had to get over the fact that not everybody learns the way they do. They had to be more open to that part of their job is motivation.
	SS2	Being at a large urban high school with a high level of poverty many of them are not prepared for that. They expect students to come in and sit down and be prepared and get started right away and do everything that the teacher asks them to do and the reality of it is our kids often don't do that.
	SS1	There are so many demands with it being a high poverty urban school. I don't know that they're prepared for that quite often. Again I just have to reiterate, if there could be more training prior to actually coming into the classroom, then that would benefit them the greatest.

Lack of Prior Experience

One of the weaknesses that was discussed during the interviews was the lack of prior experience for the resident teachers. Of the 12 interviewees, seven of the respondents, including five of the resident teachers and two of the designees, mentioned lack of prior experience as a weakness. The resident teachers' were unclear about the time management aspect and what teaching looked like: "Being thrown into it at the beginning, we were prepared to some extent but not how we should have been" (RT3, May 27, 2014). One of the designees mentioned that the resident teachers were not

prepared for the job: “They're just not prepared for the demands of the job that requires those pedagogical skills, the instructional strategies, the classroom management, how to balance” (SS1, June 13, 2014). Table 29 contains sample quotations relating to the area of lack of prior experience.

Table 29

Lack of Prior Experience Theme: Weaknesses Within the Two-Semester, Job-Embedded Internship (N = 12)

Theme (n)	Interviewee	Sample Quotations
Lack of prior Experience (7)	RTI	Just being thrown in there. You start from the very beginning and you have to learn how to manage your classroom from the start.
	RT3	Being thrown into it at the beginning, we were prepared to some extent but not how we should have been.
	RT5	I really had no idea what teaching was about.
	SS1	They’re just not prepared for the demands of the job that requires those pedagogical skills, the instructional strategies, the classroom management, how to balance.

Research Question 3

What is the process of the two-semester, job-embedded internship and what do the participants perceive should be changed?

In order to answer Research Question 3, participants were asked to respond to questions within the interview. The documents pertaining to the RTP[3] were also reviewed for details on the process of the internship.

Process of the Internship

The RTP^3 grant supported students with baccalaureate degrees in a STEM field in getting a Master of Arts in Teaching (MAT) degree. The process of selecting and interviewing potential candidates was very involved and required a great deal of attention. Once in the program, students were given the opportunity to tutor prior to entering the classroom which helped them build relationships: "They'd built relationships at schools because they had tutored in many of those classrooms before so they had a lot of the relationships" (SD1, June 2, 2014).

One of the key aspects of the program was the introduction that the program offered resident teachers in the summer semester prior to the internship. The intense course work gave the resident teacher curriculum focused on teaching strategy and pedagogy as well as providing opportunities to interact through the TeachLive virtual teaching experience: "In their initial semester when they came on-board with the program last summer in their first year, the way she's put those course components together to cover the things teachers need to be successful" (UD3, June 18, 2014). The resident teachers understood various other components of education as well: "So these resident teachers were more equipped because they understood components of lesson study before the school year began. They understood about ethics and safety and legal issues before the school year began" (UD3, July 11, 2014).

Once in the internship, resident teachers had access to a great deal of support from mentors at the school site, school district, and university. Support was important to helping students without an educational background acclimate to the teaching

environment: "So they had much more support than the typical first-year teacher gets" (UD3, July 11, 2014).

Suggestions for Improvement

Throughout the interviews resident teachers and designees had suggestions for improvement for the two-semester, job-embedded internship. Question 7 of the interviews specifically focused on suggestions for improvement, and all 12 respondents responded to the question.

Some suggestions from resident teachers included being able to observe another teacher regularly: "I think incorporating the aspect of the one semester model where you have someone you can observe" (RT2, May 27, 2014). Another suggestion was to provide assistance with practical classroom management including time management perhaps as a co-teach model: "I think we should be able to be in the classroom in a different context, not necessarily have our own class but maybe co-teach with another teacher" (RT5, June 16, 2014). Finally the ability to collaborate with other resident teachers in a PLC was a suggestion: "For us [resident teachers] to meet like a little PLC where we can discuss the challenges that we face and how we can address those challenges especially if we work in the same school we have the same demographic of kids that we are working with" (RT3, May 27, 2014). Table 30 contains sample quotations from five of the resident teachers who offered suggestions for improvement.

Table 30

Resident Teachers' Suggestions for Improvement

Resident Teachers	Sample Quotations
RT1	Incorporating someone in the classroom helping you. It doesn't have to be the whole year but maybe like a week or so.
RT2	Not as much in-classroom observation prior to starting makes this start very tough. I think incorporating the aspect of the one semester model where you have someone you can observe To be able to just check in and observe someone every once in a while.
RT3	I think having same content observations where you get a sub for a day or even just a period For us [resident teachers] to meet like a little PLC where we can discuss the challenges that we face and how we can address those challenges especially if we work in the same school we have the same demographic of kids that we are working with.
RT4	A mandatory point of time to see what the pace of the class was. An opportunity to dip their toe in prior to being thrown in the classroom.
RT5	I think we should be able to be in the classroom in a different context, not necessarily have our own class but maybe co-teach with another teacher. I think just maybe experience. Maybe not just throw us into the classroom. Maybe if they helped us with more practical things like what is it going to be like when you actually get into the classroom in the fall.

Some suggestions for improvement from the designees included providing more preparation in pedagogy and classroom management: "Instead of just having them start cold turkey in a school to have some kind of interaction before they come and make sure the interaction is in an effective classroom" (SD1, June 12, 2014). Another suggestion for improvement included utilizing a master teacher to help with reflective practices: "Having that master teacher in there for them to go through all those reflective processes"

(SD2, June 12, 2014). Another possible use for a master teacher might be the coaching process: “I think a true residency, kind of like the clinical medical model is where there's always someone there watching the resident and coaching them along the way so that they’re gradually being released” (UD3, July 11,2014). Suggestions for the actual process were included as well. These included examining the grading process: “The grading for you is probably something that might need to be as a suggestion to be improved on or looked at differently” (UD2, June 13, 2014). Evaluating the course load in order to relieve some of the intensity of the program was suggested: “I don't know if there’s any way to look at the amount of coursework or the timing of it” (SS1, June13, 2014). Continuing support from the university through the first few years of teaching was mentioned as a suggestion for improvement: “The continuation of the bridge between pre-service and in-service so there continues to be high-level support from the district and the university through the first few years of teaching,” (UD3, July 11, 2014). Table 31 contains sample quotations from seven of the designees who offered suggestions for improvement.

Table 31

Designees' Suggestions for Improvement

Designees	Sample Quotations
SD1	Instead of just having them start cold turkey in a school to have some kind of interaction before they come and make sure the interaction is in an effective classroom.
SD2	Having that master teacher in there for them to go through all those reflective processes and the things we do maybe in our heads but out loud and then our mentors say this really made me think about why I do the things I do.
UD1	Find ways to better prepare them for the classroom management.
	If we could polish how to engage learners bell to bell.
UD2	What I would say about the feedback piece is everybody involved in the process needs to be on the same page.
	The grading for you is probably something that might need to be as a suggestion to be improved on or looked at differently.
UD3	The continuation of the bridge between pre-service and in-service so there continues to be high-level support from the district and the university through the first few years of teaching.
	I think the more feedback the candidates can get the better.
	I think a true residency, kind of like the clinical medical model is where there's always someone there watching the resident and coaching them along the way so that they're gradually being released kind of like the gradual release model that we talk about in schools.
SS1	I don't know if there's any way to look at the amount of coursework or the timing of it.
	They have to have some pedagogy beforehand.
	If it's possible to give them more training before they ever come into the classroom because I think that would be very beneficial to them.
SS2	More conversation small groups with them where they're reflecting more.

Additional Findings

During the interviews, comments were made not directly related to the intent of the study. These comments may be important as leaders of teacher preparation programs consider improvements. One resident teacher considered the RTP^3 a very important and profound experience. Another resident teacher believed that while they (the resident teachers) did not know anything about education the program trained them: "They tried to train us about education because a lot of us didn't know anything about education so we learned about all these things" (RT5, June 16, 2014). One of the designees commented on the amount of growth that the resident teachers had throughout the RTP^3 program: "Some of these teachers are able to come in and in their first or second year take a leadership role in their departments at the school. That's almost unheard of" (SS2, June 13, 2014). Another designee believed that a strength of the RTP^3 program was the ability for resident teachers to go into classrooms prior to beginning their internship: "We were able to allow them to go in and tutor before they actually went out and applied," (SD1, June 12, 2014).

Summary

This chapter provided a review of the background of the case. Included was information on the RTP^3 grant as it related to the two-semester, job-embedded internship. It also gave a background of School District A and High School A to establish what the teaching environment was like for the resident teachers in the two-semester, job-embedded internship.

The case study focused on 12 individuals who were connected to the two-semester, job-embedded internship through the RTP^3 grant as either a resident teacher or someone associated with the university, School District A, or High School A. These 12 individuals participated in interviews, providing data to respond to the research questions which guided the study. The interview responses were then disaggregated and categorized according to themes to help establish the perceived effectiveness of the two-semester, job-embedded internship, examine the strengths and weaknesses of the model, explain the process, and provide suggestions for improvement of the two-semester, job-embedded internship. The Internship Assessment Summary was used to provide further perceptions of the effectiveness of the resident teachers. To establish the level of effectiveness, mean scores were analyzed as a second source of data.

Chapter 5, the final chapter of the dissertation, contains a summary and discussion of findings as well as implications for practice and recommendations for further research.

CHAPTER 5
SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Introduction

In the previous chapter the collected data were organized and analyzed to evaluate the perceived effectiveness of the two-semester, job-embedded internship. This chapter contains a brief summary of the study, a discussion of the findings, implications for practice as they relate to the internship portion of teacher preparation program, and recommendations for further research within the area of teacher preparation programs.

Case Study Summary

The purpose of this study was to examine the perceived effectiveness of the two-semester, job-embedded internship for the development of effective science, technology, engineering, and mathematics (STEM) teachers. The case study and data collection focused on a high needs urban high school. Students participating in the RTP^3 grant were required to complete a two-semester, job-embedded internship successfully to graduate with a Master of Arts in Teaching (MAT) degree. The two-semester, job-embedded internship was comparable to first year teaching as it occurred over a full school year, and resident teachers received compensation. It was also similar to a traditional internship in that there was a high level of support. The problem of this study was that a one-semester internship may not be adequate for science, technology, engineering, and mathematics (STEM) graduates who do not have experience in education, or background in educational research, theory, and pedagogy, and who are teachers.

This study was guided by three research questions. The first question related to the effectiveness of the two-semester, job-embedded internship in preparing STEM teachers. The second question focused on strengths and weaknesses of the two-semester, job-embedded internship model, and the final question focused on suggestions for improvement.

Interview data was used to respond to Research Questions 1-3 in determining the perceptions of the respondents. The Internship Evaluation Assessment Summary Sheet was also used to determine the perception of intern coordinators in regard to the effectiveness of resident teachers with regards to the FEAPs (Research Question 1).

STEM graduates in an urban high school two-semester, job-embedded internship perceived the strengths of the program to be (a) the duration of the experience; (b) the level of support that was provided; and (c) the consistent and thorough feedback. The resident teachers perceived a weakness to be the level of preparation they receive in classroom management. Designees agreed that classroom management should be a focus in teacher preparation programs. In contrast, ratings on the Internship Assessment Summary Sheet were high, although it was agreed that classroom management was an area of need.

Discussion of the Findings

The goal of this study was to determine the perceived effectiveness of the two-semester, job-embedded internship. Overall, the perception was that the two-semester, job-embedded internship was an effective model but that to increase effectiveness, some

changes may need to be made. The following discussion is based on the findings of the study and the related literature that was reviewed. The discussion has been organized around the three research questions which guided the study.

Research Question 1

What is the perception of resident teachers, university intern coordinators and school district partner designees of the effectiveness of the two-semester, job-embedded internship for preparing STEM graduates to be effective mathematics and science teachers in the target high school?

Internship Assessment Summary Sheets were completed by the intern coordinators as an evaluation of the successful completion of the internship by the resident teachers. Based on the analysis of data, all resident teachers were considered satisfactory. To graduate, resident teachers needed to earn an A or a B in the internship and, therefore, needed to maintain high ratings in all areas. All of the resident teachers received proficient and above ratings in all areas of the Florida Educator Accomplished Practices (FEAPs). On FEAP 2b, manages individual and class behaviors through a well-planned management system, the majority of the resident teachers received their lowest scores. Though the score for this FEAP was proficient and considered passing, it still showed an area on which the resident teachers needed to focus. The scores indicated that though the intern coordinators believed the resident teachers were effective, classroom management was an area that needed more improvement. Strong classroom management is key to effective teaching and will help impact learner achievement through increased learner engagement, (Marzano, 2007; Stronge et al.,2011).

In the analysis of the interviews, several questions were aimed at uncovering the perceived effectiveness of the two-semester, job-embedded internship. Some of the questions were direct, and in other cases the respondents offered their perceptions without prompting. In one instance, respondents were asked to compare the effectiveness of the resident teacher to a traditional first-year teacher. Four of the resident teachers perceived that they were equally, if not more, effective than traditional first-year teachers due to the Resident Teacher Professional Preparation Program (RTP^3). Only one of the resident teachers believed that a traditional first-year teacher was more effective, but this was primarily in the area of classroom management. Seven of the designees believed that the resident teachers were more effective than traditional first-year teachers. The designees believed that the resident teachers had strong pedagogy and understanding of the components of the education practice. Resident teachers acquired knowledge in pedagogical practice as a part of the RTP^3 through their coursework and professional learning.

The impact of the resident teacher on student learning was key in determining the effectiveness of the teacher. One of the interview questions was aimed at identifying the perceived impact on student learning. The impact on high school students' learning was divided into two categories, pedagogy and content knowledge. Six believed that the resident teacher's pedagogy had the highest impact on the high school students' learning. Three of the respondents believed the content knowledge had the highest impact on high school students' learning, and four believed that both had a high impact on high school students' learning. All of the participants agreed that the resident teachers were effective

in both areas. Although the majority of respondents thought that pedagogy had the highest impact on high school student learning, this was one area that was identified as needing improvement on the FEAPs. In the urban high school setting, it is important to prepare pre-service teachers with culturally relevant pedagogically skills so that beginning teachers will be more effective in these settings, (Matsko & Hammerness, 2014).

Resident teachers were both interns and first-year teachers. For this reason, one of the questions was geared toward identifying the effectiveness of the two-semester, job-embedded internship model as compared to the one-semester internship model under the supervision of a classroom teacher. Overall, the majority of the respondents perceived that the two-semester, job-embedded internship was effective in preparing teachers to teach in STEM fields. The perception was that the two-semester, job-embedded internship model was more effective than the one- semester model. The effectiveness was due to the time spent in the classroom and the ownership that the resident teachers had in the classroom from the beginning of the year until the end of the year. This supported Darling-Hammond & Bransford's (2005) idea that the longer and more student achievement. Effective teaching involves practices and instructional strategies, interactions within the classroom, practices that occur on case-by-case bases such as recognizing non-engagement, teacher withitness, and building relationships (Marzano, 2012). These practices take time and focus to perfect, and the two-semester, job-embedded offered both of those to the resident teacher.

Research Question 2

What do resident teachers, university intern coordinators and school district partner designees perceive to be the strengths and weaknesses of the two-semester, job-embedded, internship in preparing them to be effective mathematics and science teachers?

The analysis of data gathered in interviews was aimed toward identification of the perception of the strengths and weaknesses of the two-semester, job-embedded internship. During the interviews, several strengths were identified in seven subthemes. The strengths themes were (a) support, (b) feedback, (c) the intern coordinator, (d) collaboration with stakeholders, (e) the embedded experience, and (f) system. These were the most significant strengths stated. The respondents believed that these were areas of strength in the two-semester, job-embedded internship model that helped resident teachers to be more effective mathematics and science teachers.

During the interviews there were four themes in the area of weakness that emerged. Included were (a) demographic issues, (b) feedback, (c) classroom management, and (d) lack of prior experience. The Resident Teachers' classroom management and lack of prior experience were the most prominent weaknesses identified and were thought to impact the resident teachers' effectiveness as STEM teachers.

Research Question 3

What is the process of the two-semester, job-embedded internship and what do participants perceive should be changed?

Throughout the interviews, there were several times when the respondents commented on the process of the internship and how the process itself set the resident

teachers up for success. The process included collaboration by school district designees and university partners, interviewing to select the best possible candidates, allowing resident teachers to tutor students prior to employment, preparation in the form of intense coursework prior to teaching, and giving resident teachers conceptual knowledge of aspects of the classroom.

Twelve of the respondents had suggestions for improvement. The resident teachers focused on being able to observe a master teacher prior to their assuming responsibility for a classroom. The designees suggested more feedback and continued support through the internship process and extending into new teachers' careers. Both the designees and the resident teachers believed in the need for more support for classroom management and pedagogical practices.

Implications for Practice

Throughout the research, but particularly in the data analysis phase, clear implications for practice for teacher preparation programs emerged. The two-semester, job-embedded internship model is a unique model that works under certain circumstances. Although RTP^3 may be difficult to replicate in its entirety, some of the features of the program may be able to be implemented in other teacher preparation programs. Features that are worthy of consideration relate to: amount of time, support and feedback, preparation of intern coordinators, classroom management, grading the pre-service teacher, partnerships between stakeholders, and beyond STEM. These topics

are discussed in the following paragraphs as having implications for teacher preparation programs as they refine internship programs.

Amount of Time

In examining the data, it was clear that the two-semester model was perceived to be effective due to the amount of time spent in the classroom. In creating teacher preparation programs, it may be beneficial to increase the amount of time pre-service teachers spend in classrooms prior to taking ownership of their own classrooms. The longer amount of time would allow the teacher to not only take ownership of the class from the beginning and be able to see all the components of classroom management, but it would also allow pre-service teachers a place to practice their craft in an environment with additional monitoring, feedback, and support.

Support and Feedback

Support and feedback are an important part of any learning experience. Throughout the review of data in the present study, it was evident that there could not be too much constructive feedback and support. Pre-service teachers benefit from support and feedback throughout the internship component of the teacher preparation program. It is important to continue this practice and possibly add focused preparation for individuals working with interns in the area of feedback and support.

Preparation of Intern Coordinators

As indicated, support and feedback were thought to be very valuable in the two-semester, job-embedded internship. The intern coordinators provided that support and feedback from the university level. The intern coordinators associated with RTP^3 worked synergistically with all stakeholders to ensure feedback and support was universally aligned throughout the program. It is important that intern coordinators are prepared to provide constructive feedback that aligns with research and allows pre-service teachers to grow professionally and reflect on their instruction. Ensuring the intern coordinator is prepared to provide this feedback should be a focus for universities as teacher preparation programs are modified. Preparation of intern coordinators is vital in ensuring interns are well prepared to be effective teachers.

One of the components of feedback in this internship model was the evaluation tool, the Internship Assessment Summary Sheet. When preparing intern coordinators, it is important that a deep understanding of the evaluation tool is reached. In this case study, one of the intern coordinators failed to score the overall section of the evaluation, missing out on the opportunity to provide feedback. Intern coordinators also need to understand that the ratings for the evaluation tool are for pre-service teachers. This is not an appropriate tool to evaluate experienced teachers.

Classroom Management

When preparing new teachers, classroom management needs to be paramount. In developing teacher preparation programs and internship experiences, there needs to be

greater attention paid to pedagogy highlighting classroom management in action. This might take place in the form of observation of a master teacher.

Partnerships Between Stakeholders

In analyzing the interview responses, one of the strengths of the two-semester, job-embedded internship model was that all stakeholders were working together to ensure the success of the resident teachers. The university, the school, and the school district all had roles and voices at meetings. This partnership could be carried over into preparation programs allowing universities to prepare students with the school districts' needs in mind.

Beyond STEM

This study focused on resident teachers who had degrees in the STEM content areas. The premise was that high needs students would be better prepared in the STEM content areas if the teachers had a solid background in the area. The interviews indicated that, though content knowledge is important, pedagogical skills are needed to deliver the content. It may be beneficial to take the two-semester, job-embedded internship into other content areas such as reading, while still offering a heavy focus on pedagogy.

Recommendations for Further Research

1. This study was focused on a high needs urban high school. If given different demographics where students have different discipline needs, the results may

be different. A future study could focus on a different learning environment and different student demographics.

2. This study focused on a high school setting, incorporating STEM into high needs areas. A recommendation for a future study may be to place STEM graduates in middle schools or intermediate grades in elementary school.
3. This study focused on the science, technology, engineering, and mathematics fields. A recommendation for a future study may be to include the reading content areas.
4. This study was completed as a case study focusing on 12 respondents. It may be beneficial to replicate the study on a broader level with more participants for purposes of comparison.
5. Teacher attrition may be attributed to a lack of teacher preparation. A future study may be to analyze the attrition rate of teachers over time based on the model of internship in which a pre-service teacher participates.

Summary

The purpose of this case study was to examine the perceived effectiveness of the two-semester, job-embedded internship for the development of effective STEM teachers. The study and data collection focused on a high needs urban high school. Students participating in the RTP^3 grant were required to complete a two-semester, job-embedded internship successfully to graduate with a MAT. The data collected were gathered through interviews of individuals related to the job-embedded, two-semester internship at

a specific school. Data also included resident teachers' final scores on the Internship Assessment Summary.

In the analysis, classroom management and pedagogical practice emerged as areas of focus. The literature indicated that no level of effective content delivery would make up for a shortfall in classroom management. According to the data, classroom management was the only area that showed an identifiable difference in effectiveness. Though the perception of the designees was that classroom management was proficient, the perception of the resident teachers was that their lack of preparation in the area of classroom management hindered their ability to deliver content and maintain a high level of self-confidence. Based on the data analysis, it was the perception of those interviewed that the two-semester, job-embedded internship was more effective at preparing pre-service teachers than the one-semester internship; and the resident teachers performed at a higher level than other first-year teachers. Overall the perception of the two-semester, job-embedded internship was that it was an effective model in preparing STEM teachers.

APPENDIX A
UCF INTERNSHIP ASSESSMENT SUMMARY SHEET

UCF College of Education and Human Performance

Internship Assessment Summary Sheet

Midpoint____ Final ____	Intern Name: _____
Semester _____ Year _____ County: _____	Intern Major: _____
School Placement: _____	Grade(s) Taught: _____ Subject(s): _____
Collaborating Teacher: _____	UCF Coordinator: _____

Directions: Using the Internship Assessment Rubric, record the score for each indicator below using the following scale:

E: Exemplary	**P**: Proficient	**D**: Developing	**N**: Needs Improvement

Undergraduate Students: S/U grade will be assigned (at least all Ps by the final evaluation)
Graduate Students: A/B/F grade will be assigned (at least all Ps by the final evaluation to earn B grade and mostly Es to earn an A)

(A) Quality of Instruction	Rubric Score	S/U
1. Instructional Design and Lesson Planning. Applying concepts from human development and learning theories, the effective educator consistently:		
a. Aligns instruction with state-adopted standards at the appropriate level of rigor;		
b. Sequences lessons and concepts to ensure coherence and required prior knowledge.		
c. Designs instruction for students to achieve mastery;		
d. Selects appropriate formative assessments to monitor learning;		
e. Uses diagnostic student data to plan lessons		
f. Develops learning experiences that require students to demonstrate a variety of applicable skills and competencies.		
2. The Learning Environment. To maintain a student-centered learning environment that is safe, organized, equitable, flexible, inclusive, and collaborative, the effective educator consistently:		
a. Organizes, allocates, and manages the resources of time, space, and attention;		
b. Manages individual and class behaviors through a well-planned management system;		
c. Conveys high expectations to all students;		
d. Respects students' cultural, linguistic and family background;		
e. Models clear, acceptable oral and written communication skills;		
f. Maintains a climate of openness, inquiry, fairness and support;		
g. Integrates current information and communication technologies;		
h. Adapts the learning environment to accommodate the differing needs and diversity of students; and		

i. Utilizes current and emerging assistive technologies that enable students to participate in high-quality communication interactions and achieve their educational goals.		
3. Instructional Delivery and Facilitation. The effective educator consistently utilizes a deep and comprehensive knowledge of the subject taught to:		
a. Deliver engaging and challenging lessons;		
b. Deepen and enrich students' understanding through content area literacy strategies, verbalization of thought, and application of the subject matter;		
c. Identify gaps in students' subject matter knowledge;		
d. Modify instruction to respond to preconceptions or misconceptions;		
e. Relate and integrate the subject matter with other disciplines and life experiences;		
f. Employ higher-order questioning techniques;		
g. Apply varied instructional strategies and resources, including appropriate technology, to provide comprehensible instruction, and to teach for student understanding;		
h. Differentiate instruction based on an assessment of student learning needs and recognition of individual differences in students;		
i. Support, encourage, and provide immediate and specific feedback to students to promote student achievement; and		
j. Utilize student feedback to monitor instructional needs and to adjust instruction.		
4. Assessment. The effective educator consistently:		
a. Analyzes and applies data from multiple assessments and measures to diagnose students' learning needs, informs instruction based on those needs, and drives the learning process;		
b. Designs and aligns formative and summative assessments that match learning objectives and lead to mastery;		
c. Uses a variety of assessment tools to monitor student progress, achievement and learning gains;		
d. Modifies assessments and testing conditions to accommodate learning styles and varying levels of knowledge;		
e. Shares the importance and outcomes of student assessment data with the student and the student's parent/caregiver(s); and		
f. Applies technology to organize and integrate assessment information.		
(B) Continuous Improvement, Responsibility and Ethics		
1. Continuous Professional Improvement. The effective educator consistently:		
a. Designs purposeful professional goals to strengthen the effectiveness of instruction based on students' needs;		
b. Examines and uses data-informed research to improve instruction and student achievement;		
c. Uses a variety of data, independently, and in collaboration with colleagues, to evaluate learning outcomes, adjust planning and continuously improve the effectiveness of the lessons;		
d. Collaborates with the home, school and larger communities to foster communication and to support student learning and continuous improvement;		
e. Engages in targeted professional growth opportunities and reflective practices, both independently and in collaboration with colleagues; and		
f. Implements knowledge and skills learned in professional development in the teaching and learning process.		

UCF College of Education and Human Performance
Internship Assessment Summary Sheet

2. Professional Responsibility and Ethical Conduct. Understanding that educators are held to a high moral standard in a community, the effective educator adheres to the Code of Ethics and the Principles of Professional Conduct of the Education Profession of Florida, pursuant to State Board of Education Rules 6B-1.001 and 6B1.006, F.A.C, and fulfills the expected obligations to students, the public and the education profession.		
UCF D8. Maintains high academic standards for all learners.		
UCF D1. Believes all students can learn.		
UCF D3, D5, D6. Demonstrates fairness and equity; promotes social justice and democracy.		
UCF D4. Values diversity.		
2A. Meets deadlines, punctual, exhibits regular attendance.		
2B. Works well with others; accepts feedback and constructive criticism; is a reflective practitioner.		

Comments:

The signatures below verify that the Internship Assessment Rubric was used by the observer(s) to determine the rubric score.

Intern Signature _____ Date _____

Collaborating Teacher Signature _____ Date _____

UCF Coordinator _____ Date _____

ESOL Performance Profile/TESOL Notebook Complete* Yes _____ No____
*Elementary Ed., Early Childhood, ESE, English Ed.

APPENDIX B
DESIGNEE INTERVIEW QUESTIONS

Intern coordinator, Principal, and Partner Designee Interview Questions

1. Please describe experiences you have with the one-semester internship model and the two semester job-embedded internship model.
2. How does the two-semester, job-embedded internship prepare teachers to be effective compared with the one-semester experience?
3. What skills have the resident teachers demonstrated with and what skills do they need still need to work on?
4. What do you see are the strengths of the job-embedded internship program and what can be improved upon?
5. How does the effectiveness of the resident teachers compare to other first-year teachers with whom you have had experience?
6. In your opinion, which has had the greatest impact on high school students', learning with these first-year teachers?
7. What recommendations do you have for making the two-semester, job-embedded internship for resident teachers more effective?
8. What else would you like the researcher to know about the two-semester, job-embedded internship?
9. What has worked well with the two- semester job-embedded internship model? What suggestions do you have?
10. How would you coach your peers in using this model?

APPENDIX C
RESIDENT TEACHER INTERVIEW QUESTIONS

Resident Teacher Interview Questions

1. Please describe your experience you have with the two- semester job-embedded internship model.
2. How do you think the two-semester, job-embedded internship prepared you to be effective?
3. What skills do you believe you had prior to the two-semester, job-embedded internship and what skills do you need still need to work on?
4. What are the strengths of the job-embedded internship model and what can be improved upon?
5. How do you think your effectiveness compares to other first-year teachers with whom you have worked?
6. In your opinion, which has had the greatest impact on your students' learning, your content knowledge or your pedagogical expertise?
7. What recommendations do you have for making the two-semester, job-embedded internship more effective?
8. What else would you like the researcher to know about the two-semester, job-embedded internship?
9. What has worked well with the two- semester job-embedded internship model? What suggestions do you have?
10. How would you coach your coordinator in using this model?

APPENDIX D
INFORMED CONSENT FOR INTERVIEWS

A CASE STUDY OF TWO-SEMESTER, JOB-EMBEDDED INTERNSHIP IN AN URBAN SCHOOL

Informed Consent

Principal Investigator(s): *Stephanie Osmond MEd*

Faculty Supervisor: *Rosemarye T. Taylor, Ph.D.*

Investigational Site(s): *University of Central Florida, School of Teaching, Learning, and Leadership and/ or and mutually agreed upon neutral site.*

Introduction: Researchers at the University of Central Florida (UCF) study many topics. To do this we need the help of people who agree to take part in a research study. You are being invited to take part in a research study that will include about *14* people at UCF. You have been asked to take part in this research study because you are a resident teacher in RTP^3, are a UCF intern coordinator for the resident teachers, or are the school district designee. You must be 18 years of age or older to be included in the research study.

The person doing this research is Stephanie Osmond of the University of Central Florida School of Teaching Learning and Leadership. Because the researcher is a doctoral student Dr. Rose Taylor, a UCF faculty supervisor in the School of Teaching, Learning, and Leadership, is guiding her.

What you should know about a research study:

- Someone will explain this research study to you.

- A research study is something you volunteer for.
- Whether or not you take part is up to you.
- You should take part in this study only because you want to.
- You can choose not to take part in the research study.
- You can agree to take part now and later change your mind.
- Whatever you decide it will not be held against you.
- Feel free to ask all the questions you want before you decide.

Purpose of the research study: The purpose of this study is to understand the perception of the two-semester, job-embedded internship and its effectiveness.

What you will be asked to do in the study: If you agree to be interviewed, you will be asked questions about your perceptions of the two-semester, job-embedded internship. Stephanie Osmond will conduct it with assistance from Dr. Taylor. You do not have to answer every question or complete every task. You will not lose any benefits if you skip questions or tasks.

Location: Interviews will take place at an agreed public place.

Time required: We expect that you will be in this research study for one 30-minute session, outside of the work and class day.

Audiotaping:

You will be audio taped during this study. If you do not want to be audio taped, you will be able to be in the study. Discuss this with the researcher or a research team member. If you are audio taped, the tape will be kept in a locked, safe place. The tape will be erased or destroyed when the study is completed.

Risks: There are no reasonably foreseeable risks or discomforts involved in taking part in this study.

Benefits: There are no expected benefits to you for taking part in this study.

Compensation or payment:

There is no compensation or other payment to you for taking part in this study. There is no compensation, payment or extra credit for taking part in this study.

Confidentiality: We will limit your personal data collected in this study to people who have a need to review this information. We cannot promise complete secrecy. Your participation and comments will be confidential and only known by the researcher. Data will be reported in aggregate and with no personally identifying information. All participants will be assigned a numerical code for reporting important quotes.

Study contact for questions about the study or to report a problem: If you have questions, concerns, or complaints, or think the research has hurt you, talk to contact Stephanie Osmond doctoral student the University of Central Florida School of Teaching Learning and Leadership by email Stephanie.osmond@knights.ucf.edu or at 321-438-8396, Dr. Taylor, Faculty Supervisor, by phone: 407-823-1469 or email: rosemarye.taylor@ucf.edu

IRB contact about your rights in the study or to report a complaint: Research at the University of Central Florida involving human participants is carried out under the oversight of the Institutional Review Board (UCF IRB). This research has been reviewed and approved by the IRB. For information about the rights of people who take part in research, please contact: Institutional Review Board, University of Central Florida, Office of Research & Commercialization, 12201 Research Parkway, Suite 501, Orlando, FL 32826-3246 or by telephone at (407) 823-2901. You may also talk to them for any of the following:

- The research team is not answering your questions, concerns, or complaints.
- You cannot reach the research team.
- You want to talk to someone besides the research team.
- You want to get information or provide input about this research.

Your signature below indicates your permission to take part in this research.

DO NOT SIGN THIS FORM AFTER THE IRB EXPIRATION DATE BELOW

Name of participant	
Signature of participant	Date
Signature of person obtaining consent	Date
Printed name of person obtaining consent	

APPENDIX E
IRB OUTCOME LETTER

University of Central Florida Institutional Review Board
Office of Research & Commercialization
12201 Research Parkway, Suite 501
Orlando, Florida 32826-3246
Telephone: 407-823-2901 or 407-882-2276
www.research.ucf.edu/compliance/irb.html

Approval of Exempt Human Research

From: **UCF Institutional Review Board #1**
FWA00000351, IRB00001138

To: **Stephanie Osmond**

Date: **May 02, 2014**

Dear Researcher:

On 5/2/2014, the IRB approved the following activity as human participant research that is exempt from regulation:

Type of Review:	Exempt Determination
Project Title:	A CASE STUDY OF THE TWO-SEMESTER JOB EMBEDDED INTERNSHIP IN AN URBAN HIGH SCHOOL
Investigator:	Stephanie Osmond
IRB Number:	SBE-14-10269
Funding Agency:	
Grant Title:	
Research ID:	N/A

This determination applies only to the activities described in the IRB submission and does not apply should any changes be made. If changes are made and there are questions about whether these changes affect the exempt status of the human research, please contact the IRB. When you have completed your research, please submit a Study Closure request in iRIS so that IRB records will be accurate.

In the conduct of this research, you are responsible to follow the requirements of the Investigator Manual.

On behalf of Sophia Dziegielewski, Ph.D., L.C.S.W., UCF IRB Chair, this letter is signed by:

Signature applied by Joanne Muratori on 05/02/2014 10:11:36 AM EDT

IRB Coordinator

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