UNIVERSITY COURSEWORK AND FIELD EXPERIENCES: PRE-SERVICE TEACHERS' PERCEPTIONS AND EXPERIENCES WITH KEY COMPONENTS OF RESPONSE TO INTERVENTION

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Pre-service teachers are entering the field as novice practitioners with concerns regarding their ability to confidently and effectively implement key components of response to intervention (RTI). This concurrent mixed-methods study explores pre-service teachers' (N =169) perceptions and experiences with key components of RTI (e.g., screening, multi-tiered evidence-based intervention, progress monitoring, and data-based decision making). A questionnaire in conjunction with open-response items and four focus groups provided data to identify aspects of university coursework and field experiences that contribute to pre-service teachers' perceived ability to confidently implement key components of RTI. The results of this investigation show between group differences in perception and experiences related to RTI. Special education certification seekers reported higher perceived confidence, receiving more coursework, and having more field experiences with RTI than elementary, middle grade, and secondary certification seekers. Among all groups, secondary certification seekers reported the lowest confidence, least amount of coursework, and fewest field experiences with RTI. Pre-service teachers in this study valued coursework and knowledgeable instructors who emphasized the components of RTI and participating in hands-on class activities. Participants noted benefits from or a desire for field experiences with struggling learners and having mentors with knowledge and expertise in RTI. Study findings suggest providing pre-service teachers with comprehensive preparation in RTI during coursework in combination with field experiences working with struggling learners may increase perceived confidence and is valued.

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PRE-SERVICE TEACHERS' FIELD EXPERIENCES WITH COMPONENTS OF RESPONSE TO INTERVENTION: A SYSTEMATIC REVIEW

Introduction

Schools across the United States have widely adopted a response to intervention (RTI) framework, yet the literature suggests novice teachers are entering their classrooms feeling unprepared to implement key features of RTI such as data-based decision making and progress monitoring (Barrio & Combes, 2015; Barrio, Lindo, Combes, & Hovey, 2015; Burns & Ysseldyke, 2009; Prasse et al., 2012). Thus, this is a review of the literature from 2004-2015 examining pre-service teachers' field experiences with the four main components of RTI: screening, multi-tiered evidence-based interventions, data-based decision making, and progress monitoring.

RTI was proposed in the Reauthorization of the Individuals with Disabilities Education Act (IDEIA, 2004) because of concerns related to the discrepancy model. IDEIA (2004) required educators provide instructional support to struggling learners and document the effectiveness of interventions implemented. Within an RTI framework, teachers screen all students and those experiencing academic or behavioral difficulties are provided high quality evidence-based intervention (Fuchs, Fuchs, & Compton, 2004), student progress is monitored, and data is collected and analyzed to make instructional decisions. Prior to RTI, the IQ-achievement discrepancy model was the primary means of identifying students for special education services. For students to be identified as having a specific learning disability (SLD), students had to show a significant discrepancy between their academic achievement and their cognitive ability (Kavale & Spaulding, 2008). The discrepancy model was perceived as a "wait to fail" approach while RTI is considered an early intervention and prevention model.

RTI core principles have been extensively researched and are believed to improve

educational practices by encouraging educators to implement evidence-based supports and comprehensively monitor student progress (Fuchs & Vaughn, 2012; Hollenbeck, 2007; Hoover, 2010; Stuart, Rinaldi, & Higgins-Averill, 2011). Not only did RTI alter the way in which students with SLD would be identified, it changed teachers' duties and responsibilities. Before RTI, screening, assessing, and educating students with learning difficulties was primarily the responsibility of special education teachers (Barrio & Combes, 2015). Today, schools adopting an RTI framework require general education teachers to screen, implement evidence-based multi-tiered interventions, monitor students' responsiveness to intervention, and collect and use data to drive their instructional decisions. Thus, the traditional roles and responsibilities of special education and general education teachers have changed as a result of schools adopting an RTI framework (Fuchs, Fuchs, & Stecker, 2010).

As researchers examine the effectiveness of teacher preparation programs (Brownell, Ross, Colón, & McCallum, 2005; Compton et al., 2012; Denton, 2012; Vaughn et al., 2009) and pre-service teachers' perceptions of RTI (Barrio & Combes, 2014; Conderman & Johnston-Rodriguez, 2009; Tillery, Varjas, Meyers, & Collins 2010), an understanding of the ways in which field experiences help prepare pre-service teachers to implement key components of RTI becomes critical. Given the current emphasis on screening students, selecting and implementing evidence-based interventions, making data-based instructional decisions, and monitoring student progress, an understanding of how best to prepare pre-service teachers in these elements of RTI is needed. In order for pre-service teachers to enter the field and demonstrate effectiveness as novice practitioners, teachers in training must acquire not just pedagogical knowledge but also authentic experiences (Prasse et al., 2012) that expose them to the increasingly wide range of student needs found in today's classrooms (Conderman & Johnston-

Rodriguez, 2009).

Research published over the past decade has shown the effectiveness of properly implemented RTI (Fuchs & Vaughn, 2012) and the significance of quality teacher preparation (Compton et al., 2012; Denton, 2012; Fuchs, Compton, Fuchs, Bryant, & Davis, 2008; Vaughn et al., 2009). However, studies on RTI suggest practitioners do not completely understand (McCombes-Tolis & Spear-Swerling, 2011) or feel prepared to implement (Barrio & Combes, 2015) all components of the RTI framework. According to Conderman and Johnston-Rodriguez (2009), teachers' feelings regarding skills associated with making data-driven instructional decisions and monitoring student progress are negative due to perceived feelings of being unprepared to undertake these tasks.

As with in-service teachers, a variety of factors likely contribute to pre-service teachers feeling negatively in regard to their perceived ability to implement components of RTI. Conderman and Johnston-Rodriguez (2009) and Tillery et al. (2010) posit pre-service teachers feel an overall lack of readiness to teach students with learning and behavioral difficulties. Barrio and Combes (2015) concluded that pre-service teachers' concerns were related to a lack of experiences related to RTI. For those reasons, teacher preparation programs must examine how pre-service teachers are being prepared and provide field experiences that increase pre-service teachers' knowledge and readiness to implement RTI.

Field Experiences

The National Research Council (2010) identified field experiences as a critical component of effective teacher preparation. Field activities such as classroom observations and student teaching allow pre-service teachers to gain experience and understanding first-hand. This helps fill gaps in knowledge and obtain practical experience while under supervision

(Hallman, 2012). Ingersoll, Jenkins, and Lux (2014) suggest field experiences serve an important purpose in teacher preparation because teaching is not an innate gift but learned through practice. Coffey (2010) proposes field placements offer a context by which pre-service teachers can connect theory with practice. Research by Conderman, Johnston-Rodriguez, Hartman, and Walker (2012) found participants believed clinical experiences had the highest impact on their professional preparation. For instance, participants noted the benefits of having "real life experiences" as well as the value of observing in-practice teachers implementing a variety of different instructional strategies. Moreover, respondents felt they needed more training in topics such as RTI and especially components such as progress monitoring.

Eisenhardt et al. (2012) note that pre-service teachers need to see and practice pedagogical knowledge acquired through university-based coursework since pre-service teachers often begin their field experiences with preconceived notions about teaching and learning based on their personal learning experiences. Athanases and Achinstein (2003) found that pre-service teachers lack understanding of students' academic skills because they have not had opportunities to work directly with students. Furthermore, results from Rinn and Nelson (2009) revealed that pre-service teachers have difficulty identifying student strengths, yet are able to identify student weaknesses. The authors go on to suggest field experiences are valuable because pre-service teachers are able to work closely with students in actual classroom settings.

Working directly with actual students allows pre-service teachers to gain an understanding of and recognize the different academic levels of their students. Hawkins, Kroeger, Musti-Rao, Barnett, and Ward (2008) believe in-depth field experiences must be developed that specifically allow pre-service teachers to not only practice skills but to reflect on their instructional decisions. Hanline (2010) found pre-service teachers reported benefits from

observing effective teaching and seeing their cooperating teachers implement best practices.

Rationale and Objectives for this Review

The purpose of this systematic literature review is to examine the existing research on pre-service teacher preparation in RTI presented in peer-reviewed journals from 2004 to 2015. This literature synthesis attempts to address the following research question: 1) To what extent are pre-service teacher field experiences with the components of RTI being addressed by the literature? and 2) Which experiences during fieldwork increase pre-service teachers' feelings of preparedness to implement the components of RTI as novice practitioners?

Method

A systematic review of the literature occurred in two phases: 1) a thorough search of electronic databases and 2) a comprehensive hand search of reference lists of publications that met all inclusionary criteria. Inclusionary and exclusionary criteria were established prior to the examination of publications. A total of eight peer reviewed journal articles met inclusion criteria.

Identification of Studies

A systematic electronic exploration of the literature was conducted using database searches. Databases searched include: Academic Search Complete, Eric via EBSCOhost, JSTOR, Professional Development Collection, PsychINFO, Sage Journals Online, and Taylor and Francis Online. A Boolean search using the descriptors preservice AND (field experience OR fieldwork OR practicum) AND (response to intervention OR screening OR tiered instruction OR tiered intervention OR progress monitoring OR data-based decision making) were used to search and resulted in an initial identification of 16,508 publications.

The goal of only including highly relevant publications necessitated the formulation of

inclusionary and exclusionary criteria. For inclusion, studies must have taken place in the United States and been written in English since educational practices and terminology vary around the world. Furthermore, RTI or at least one component of RTI (i.e., screening, tiered intervention, progress monitoring, or data-based decision making) must have been mentioned in relation to pre-service field experiences. Thus, studies focused on in-service teachers were excluded because the goal of this review is to better understand the field experiences pre-service teachers have with RTI. Also, studies must have been published between January 2004 and December 2015 in a peer-reviewed journal. The rationale for beginning the search in 2004 was the recommendation to use RTI contained in IDEIA (2004). Additionally, limiting publications to those published in peer-reviewed journals is because journals employing a peer review process strive to maintain standards of quality in their field. Also the manuscripts received at least one level of review prior to publication. Publications not meeting all inclusionary requirements were excluded. After narrowing the search using inclusionary and exclusionary criteria, the results were reduced to 83 articles.

In order to locate additional publications relevant to this systematic review, a thorough hand search of the reference lists of the 83 publications were examined to identify articles that were not located through database search. Hand search resulted in identification of an additional 16 publications. One of the 16 publications met eligibility criteria and was deemed appropriate for addressing the research questions and included in this review.

After systematic evaluation of all publications, a total of eight studies were selected for inclusion in this literature synthesis. All publications were thoroughly read, coded, and study characteristics identified. Publication results were systematically summarized and the content analyzed prior to synthesizing results for this review.

Coding Procedures and Data Analysis

The author coded the following features of each article: (1) source information (i.e., author(s), journal, and year of publication), (2) type of study and sample size (i.e., quantitative study, qualitative study, mixed methods), (3) grade level focus (i.e., elementary, secondary, K-8, K-12), and (4) RTI component(s) addressed (i.e., screening, tiered evidence-based intervention, progress monitoring, data-based decision making, RTI in general). Table 1 represents a summary of publication features. Frequencies of response for each of the categories in the coding system were used for descriptive statistics. To ensure reliability of coding, an assistant researcher coded all eight of the publications included in this literature synthesis. The inter-rater coding reliability was 100%.

Table 1

Publications selected and their features

Author	Year	Journal	Type of Study	Grade Level Focus	RTI Component
Al Otaiba, Lake, Freulich, Folsom, & Guidry	2010	*Reading and Writing*	Mixed methods (N = 28)	Elementary	RTI in general
Brannon & Fiene	2013	*Education*	Mixed methods (N = 26) 1st semester (N = 21) 2nd semester	K-8	RTI in general
Conderman, Johnston-Rodriguez, Hartman, & Walker	2012	*Teacher Education and Special Education*	Mixed methods (N = 64)	K-12	RTI in general

Eisenhart, Besnoy, and Steele	2012	*SRATE Journal*	Qualitative (*N* = 58)	Elementary	Progress monitoring and data-based decision making
Hanline	2010	*Teacher Education and Special Education*	Qualitative (*N* = 15)	Elementary	Progress monitoring
Hawkins, Kroeger, Musti-Rao, Barnett, & Ward	2008	*Psychology in the Schools*	Qualitative (*N* = 2)	Elementary	RTI in general
Ross & Lignugaris-Kraft	2015	*Journal of the National Association for Alternative Certification*	Qualitative (*N* = 3)	Elementary	RTI in general
Wilkins & Shin	2010	*Kappa Delta Pi Record*	Qualitative (*N* = 64)	Elementary	Data-based decision making

Note. RTI = Response to Intervention

Results

A total of eight published articles were selected, coded, and analyzed based on the search criteria. The eight publications combined to represent 281 pre-service teachers in three geographic regions of the United States (e.g., Midwest, Southeast, and Mountain West). Three studies took place in the Midwest, one in the Southeast, one in the Mountain West, and two studies did not specify the location. Five of the eight publications discussed RTI in a general, one publication focused on progress monitoring, one publication specifically discussed data-based decision making, and one publication addressed both progress monitoring and data-based decision making. The majority of publications (75%) focused on pre-service teachers whose field experiences were in elementary settings. Two studies had participants seeking elementary as well as participants seeking secondary certification (25%). No publications focused exclusively on

pre-service teachers seeking secondary certification. The publications meeting the inclusionary criteria used either qualitative methodology (62.5%, n = 5) or mixed methodology (37.5%, n = 3). No publication meeting the inclusionary criteria addressed all four key components of RTI.

Response to Intervention Components

According to the Center on response to intervention at the American Institutes of Research (AIR), screenings, along with multi-tiered evidence-based interventions, progress monitoring, and data-based decision making are the main components of RTI. Although RTI's components have been extensively researched (Fuchs & Vaughn, 2012; Hollenbeck, 2007; Stuart, Rinaldi, & Higgins-Averill, 2011), ensuring effective implementation of RTI components is difficult because of the considerable teacher expertise required (Robinson, Bursuck, & Sinclair, 2013). For example, Catts, Nielsen, Bridges, Liu, and Bontempo (2015) point out that in order for RTI to be truly successful, progress monitoring must be accurate. Additionally, teachers must implement evidence-based interventions with fidelity. Thus, it is imperative for teacher preparation programs to train pre-service teachers in each of the RTI components.

Screening

Student screening is a proactive means of identifying students who might be at risk for developing an academic or behavioral issue (Catts et al., 2015; Gresham, Hunter, Corwin, & Fischer, 2013). A study of pre-service training in RTI by Hawkins et al. (2008) found general education kindergarten students' literacy skills were screened three times a year. Screening data of students was evaluated and those students showing lack of adequate progress were provided with pull-out intervention assistance. Similarly, a case study by Ross and Lignugaris-Kraft (2015) examined the experiences of three pre-service teachers in a two-year non-

traditional teacher preparation program that placed general and special education certification seeking undergraduates in high need schools to implement multi-tiered evidence-based academic and behavioral interventions. Thorough training in the RTI tiers allowed the pre-service teachers to effectively identify struggling students in need of tiered evidence-based interventions.

Multi-Tiered Instruction and Evidence-Based Intervention

A survey of 64 recent special education graduates by Conderman et al. (2012) found that teacher candidates felt confident in their ability to provide students with individualized instruction. The authors believe pre-service teacher confidence in that and other areas such as behavior management was likely the result of extensive coursework and authentic clinical-related projects focused on those topics. Similarly, a mixed-method study by Al Otaiba, Lake, Greulich, Folsom, and Guidry (2012) found that pre-service teachers who receive university-based coursework in conducting assessments and using evidence-based practices report feeling well-prepared and confident about their teaching during field experiences.

Progress Monitoring

Hanline (2010) conducted a qualitative study with 15 early childhood education majors as they completed their field experiences. The findings from Hanline's study suggest that although pre-service teachers struggled with the time commitment required to collect assessment data, they recognized data collection as necessary for progress monitoring. Eisenhardt, Besnoy and Steele (2012) had similar findings. The pre-service elementary teachers in their study found observing and recording student progress provided valuable insight which helped the teacher candidates to plan instruction. Furthermore, one participant noted that recording student learning progress is an essential task for teachers. These findings suggest that field experiences

that allow pre-service teachers to practice components of RTI such as progress monitoring help them understand the value and applicability of practices associated with RTI.

Data-Based Decision Making

Wilkins and Shin (2010) followed 64 pre-service elementary teachers as they used peer feedback during a year of fieldwork to reflect on data- driven practices. Findings suggest pre-service teachers benefited from receiving feedback by improving pre-service teachers' professional practice, student learning, and classroom instruction. Eisenhardt et al. (2012) followed 58 pre-service teachers as they collected data and conducted assessments on two elementary students identified by their classroom mentor teachers as "struggling." The Eisenhardt research team found that pre-service teachers reported that assessing and documenting their assigned students helped them make more effective instructional decisions.

Discussion

The findings from this literature review highlight the lack of studies focusing on pre-service teachers' field experiences with the components of RTI. Although thousands of journal publications mention RTI or its components and fieldwork, a fraction of one percent actually address teacher candidates' field experiences with RTI implementation while under university supervision. Studies examining this specific topic are needed since teachers' responsibilities in the classroom have expanded due to initiatives such as RTI. Teacher preparation programs must train pre-service teachers to effectively implement the key components of RTI. As such, it is crucial that preparation programs provide their pre-service teachers with the coursework, training, and field experiences necessary for them to enter the field feeling prepared to effectively carry out these duties. Providing structured in-depth field experiences with a wide variety of students under the supervision of skilled and supportive collaborative teachers is

warranted and may improve the level of confidence and feelings of preparedness pre-service teachers have regarding implementation of the RTI components.

Making changes to teacher preparation curriculum is not easy or quick (Conderman & Johnston-Rodriguez, 2009). Nevertheless, Sayeski and Higgins (2014) encourage teacher education programs to focus on providing pre-service teachers with the knowledge and skills they will need to be successful practitioners. In keeping with the opinions of Conderman and Johnston-Rodriguez (2009), Sayeski and Higgins note that institutional habits often create barriers to program change. For instance, some faculty may be resistant to making changes and instead cling to the status quo. Furthermore, deciding which content to remove in order to make room for new requirements is often difficult. Even though program change is difficult, the results of this systematic literature review suggest that high quality field experiences are needed. These studies on pre-service teachers' field experiences with RTI indicate that practical experiences are beneficial and improve pre-service teachers' feelings of confidence and preparedness to fully implement RTI.

Training teacher candidates to feel confident and competent in their ability to make data-based instructional decisions and in monitoring progress as well as in the other key elements of RTI should be a focus of teacher preparation programs. Doing so is important since Prasse et al. (2012) note the growing body of research demonstrating the relationship between teacher efficacy and positive student outcomes. Harvey, Yssel, and Jones (2015) examined institutions of higher education in the Midwest to see how teacher preparation programs prepared their pre-service teachers in RTI. Harvey and colleagues found 33.8% of teacher educators either did not know if their department did (20.3%) or if their department did not (13.5%) provide pre-service teachers with field experiences that allowed for engagement with RTI planning, assessment, and

progress monitoring.

These percentages should be surprising considering Kuo (2014) suggests it is important for teacher educators to understand the experiences related to RTI that their pre-service teachers have to effectively prepare their candidates to enter the field as practitioners. Since teacher educators may have little control over the activities pre-service teachers participate in during their field experiences, it becomes imperative that university coursework include comprehensive instruction on each component of RTI and provide opportunities for teacher candidates to practice skills associated with RTI.

Limitations

There are several limitations associated with this synthesis of literature on RTI and pre-service teachers' field experiences. First, the inclusionary and exclusionary criteria established for this review must be considered. Although the purpose of this review was to better understand the experiences teacher candidates have with RTI components during fieldwork, identifying publications was difficult due to the lack of literature on this topic. Additionally, the search for literature was based on specific descriptors that other researchers could choose to expand. Thus, caution is advised in trying to generalize the findings of this literature synthesis.

Conclusion and Implications

Although a wealth of research on teacher preparation has linked coursework that is interwoven with field experiences to teacher preparedness (Darling-Hammond, 2012; Wilson, Floden, & Ferrini-Mundy, 2001; Zeichner, 2010), the National Research Council (2010) points out that there is no definitive evidence as to which aspects of field experiences have the most impact on teacher effectiveness. For that reason, it is imperative research on pre-service teacher field experiences be conducted to gain a better understanding of which activities provide teacher

candidates with opportunities for practicing the key components of RTI while in natural environments. Supervised field experiences allowing for supervised implementation of RTI components and opportunities to observe components being implemented by skilled cooperating teachers is warranted. These observations and experiences may help increase the feelings of confidence and preparedness of novice practitioners. Follow-up research with pre-service teachers who have had extensive practice implementing RTI components is need to identify whether high-quality field experiences do in fact increase practitioner effectiveness. Field work is a necessary component of teacher preparation programs. Although pedagogical knowledge is important, to best prepare novice teachers to provide effective instruction to students at all academic levels, pre-service teachers need opportunities to implement the components of RTI under skilled supervision during field experiences. Hawkins et al. (2008) agree emphasizing there is a need for field experiences with RTI that are supported by coursework.

One issue with providing pre-service teachers with practical experience with implementing the components of RTI is variability inherent in field experiences. For example, Brannon and Fiene (2013) suggest traditional fieldwork tends to lack structure, which is contrary to recommendations of researchers such as Eisenhardt et al. (2012) who suggest that pre-service teachers are likely to benefit from having highly structured field placements that provide them with “up-close and personal” interactions with students. Brannon and Fiene (2013) agree and recommend providing pre-service teachers with in-depth and extensive opportunities to work with students who are struggling.

It reasons that the more structured experiences teacher candidates have with students at various ability levels while under supervision, the more prepared they will feel to support all

students upon entering the field. Brannon and Fiene (2013) further point out the benefit of field experiences that weave theory and practice together so that content knowledge can be applied in actual classroom situations. This recommendation aligns with the findings of Leko and Brownell (2011) that pre-service teachers may benefit from opportunities to situate their curricular knowledge in practice. There is clearly a need for RTI to be more thoroughly addressed in teacher preparation programs; both in in field experiences and in coursework. However, coursework in RTI is not enough; teacher candidates need field experiences that include skilled mentorship. Skilled mentorship affords pre-service teachers opportunities to observe RTI in practice as well as opportunities to implement RTI on their own while under supervision.

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*References marked with an asterisk indicate studies included in the literature synthesis

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UNIVERSITY COURSEWORK AND FIELD EXPERIENCES: PRE-SERVICE TEACHERS' PERCEPTIONS AND EXPERIENCES WITH KEY COMPONENTS OF RESPONSE TO INTERVENTION

Introduction

A major challenge facing teacher preparation programs is preparing pre-service teachers to be effective with students of all academic and behavioral levels. In 2004, the Individuals with Disabilities Education Improvement Act (IDEIA) required educators to provide instructional support to all students experiencing difficulties and to document the effectiveness of the strategies implemented with at-risk students. At the time, the Department of Education (DOE) released a statement explaining the proposed regulations found in IDEIA and emphasized that students who are not achieving at the expected rate are to receive individualized instruction (DOE, 2004; Garcia, 2009). Therefore, IDEA urged the implementation of a response to intervention (RTI) framework for identifying and intervening with students experiencing learning and behavioral difficulties.

Recent research demonstrates teacher candidates have concerns about their ability to implement RTI (Barrio & Combes, 2015; Gehrke & Cocchiarella, 2013; Spear-Swerling & Cheesman, 2012). Robichaux and Guarino (2012) suggest it is important for teacher preparation programs to understand the concerns pre-service teachers have in regard to competently implementing RTI as practitioners. However, it is not sufficient for teacher preparation programs to be aware of pre-service teachers' concerns. Preparation programs must discover in which areas gaps in experience with RTI exist. Identifying gaps in pre-service teachers' training will provide teacher preparation programs with the information necessary to effectively adjust

university coursework and practicum experiences to better prepare pre-service teachers to successfully implement RTI as novice in-service practitioners.

Teacher Preparation

Teachers' roles in the classroom continue to evolve due to initiatives such as RTI. Consequently, teacher preparation programs are being tasked with training their pre-service teachers in RTI and providing real-world opportunities for their teacher candidates to practice the key components of RTI (e.g., screening, multi-tiered evidence-based intervention, progress monitoring, and data-based decision making). Given the current emphasis on the components of RTI, an understanding of how best to prepare pre-service teachers in RTI should be examined. In order for pre-service teachers to immediately enter the field and demonstrate effectiveness as novice practitioners, teachers in training must acquire not just pedagogical knowledge but also authentic experiences. Consequently, it becomes critical that teacher preparation programs afford their pre-service teachers practical experiences and opportunities that expose them to the increasingly wide range of student needs found in today's classrooms (Conderman & Johnston-Rodriguez, 2009).

Properly implemented RTI has shown effectiveness (see Fuchs & Vaughn, 2012), as has quality teacher preparation (see Compton et al., 2012; Denton, 2012; Fuchs, Compton, Fuchs, & Davis, 2008; Gerber, 2005; Gersten et al., 2008; Vaughn et al., 2009). However, studies on RTI suggest pre-service as well as in-services teachers do not completely understand all components of the RTI framework (McCombes-Tolis & Spear-Swerling, 2011) and the increased responsibilities associated with RTI may exacerbate the pressure felt by educators. Conderman and Johnston-Rodriguez (2009) suggest teachers' feelings regarding skills associated with

components such as screening and progress monitoring are negative due to perceived feelings of being unprepared to undertake those tasks.

A variety of factors such as lack of knowledge, preparation, and experience likely contribute to pre-service teachers feeling negatively in regard to their perceived ability to implement the components of RTI (Barrio & Combes, 2015; Conderman & Johnston-Rodriguez, 2009; Greenfield, Rinaldi, Proctor, & Cardarelli, 2010; Tillery, Varjas, Meyers, & Collins, 2010). Subsequently it behooves teacher preparation programs to examine how pre-service teachers are being prepared and identify practices that increase pre-service teacher perceptions of readiness to implement RTI. Research by Greenfield et al. (2010) suggest there is a need for the key components of RTI to be more comprehensively addressed in teacher preparation programs to increase pre-service teachers' experiences with RTI.

Value of University Coursework

A growing body of literature provides support for the belief that teacher preparation programs are the key to preparing pre-service teachers to implement RTI. Denton, Vaughn, & Fletcher (2003) suggest this is largely because pre-service teachers' knowledge, skills, and dispositions are formed during their preparation program. The authors note the philosophy, skills, and methods pre-service teachers obtain during their preparation program have a direct impact on K-12 student outcomes. Sociocultural theory (Vygotsky, 1978) is predicated on the belief that student learning is considerably influenced by experiences, and Clark, Byrnes, and Sudweeks (2015) point out pre-service teachers' educational experiences with the methods of teaching impact their field-based teaching. Denton et al. (2003) propose teacher preparation program curricula may need revamping to produce pre-service teachers who understand and are ready to implement the RTI model. Furthermore, even though professional organizations have

proposed standards to guide pre-service teacher training (e.g., Council for Exceptional Children, 2012), Hawkins, Kroeger, Musti-Roa, Barnett, and Ward (2008) contend having training standards for pre-service teacher development in RTI is insufficient. For this reason, Hawkins et al. call for the integration of coursework and field experiences.

Value of Field Experiences

Fieldwork allows pre-service teachers to gain practical skills through firsthand experiences that fill gaps in their knowledge while under supervision (Hallman, 2012). Field experiences are an integral part of teacher preparation programs because teaching is not innate but rather learned through practical experiences (Ingersoll, Jenkins, & Lux, 2014). Moreover, the National Research Council (2010) recognizes fieldwork as a necessary component of effective teacher preparation. Clark et al. (2015) agree and submit field experience is one of the most important experiences pre-service teachers participate in during their preparation programs.

Coffey (2010) proposes that field experiences are important pieces of teacher preparation programs because practica placements offer contexts allowing pre-service teachers to connect theory with practice. Eisenhardt, Besnoy, and Steele (2012) emphasize the importance of providing pre-service teachers with opportunities to practice the knowledge acquired in their university-based coursework. Even though teacher preparation research links coursework interwoven with fieldwork to preparedness (Darling-Hammond, 2012; Wilson, Floden, & Ferrini-Mundy, 2001; Zeichner, 2010), there is no definite evidence identifying which aspects of fieldwork have the greatest impact on teacher effectiveness (National Research Council, 2010).

Eisenhardt and colleagues (2012) suggest pre-service teachers commence their fieldwork holding preconceived ideas about education based on their past experiences. Rinn and Nelson (2009) submit pre-service practica experiences are needed that allow pre-service teachers to

work closely with students in authentic settings. Working directly with students allow pre-service teachers to experience an array of student academic and behavioral levels. Furthermore, Hawkins et al. (2008) purport in-depth field experiences must be developed that specifically allow pre-service teachers to practice teaching skills and reflect on instructional decisions.

Response to Intervention

RTI is a tiered educational framework that supports students who are struggling academically or behaviorally while focusing on prevention (Fuchs, Fuchs, & Compton, 2004; Sugai, Horner, & Gresham, 2002). The RTI framework is also used to monitor how well students respond to evidence-based instructional interventions (Klotz & Canter, 2007; National Center on Response to Intervention, n.d.). McLesky, Rosenberg, and Westling (2013) describe evidence-base interventions as instructional strategies that have been peer-reviewed and found to be effective through scientific research.

RTI was first proposed due to concerns related to the discrepancy model. Prior to RTI, the IQ-achievement discrepancy model was the primary means of identifying students with learning difficulties for special education services. For students to be identified for special education services, struggling learners had to show a significant discrepancy between academic achievement and cognitive ability (Kavale & Spaulding, 2008). RTI altered both the way in which students with learning difficulties would be identified and teacher responsibilities. Prior to RTI, special educators were primarily responsible for screening, assessing, and educating students with learning disabilities (Barrio & Combes, 2015). Thus, research suggests the roles and duties of general education and special education teachers have changed as result of RTI (Fuchs, Fuchs, & Stecker, 2010).

Defining Response to Intervention Components

The Center on Response to Intervention at the American Institutes of Research (AIR) identify screenings, multi-tiered evidence-based interventions, progress monitoring, and data-based decision making as key components of RTI. The Center on Response to Intervention at the AIR continues the work of the National Center on Response to Intervention which AIR ran from 2007-2012 with a grant from the Office of Special Education Programs. Robinson, Bursuck, and Sinclair (2013) emphasize that effective implementation of RTI components requires considerable teacher expertise. For example, Catts, Nielsen, Bridges, Liu, and Bontempo (2015) note that progress monitoring must be accurate and teachers must implement interventions with fidelity in order for RTI is to be effective. Thus, it becomes critical pre-service teachers be trained in each of the RTI components.

Screening

Screening students is a way to identify learners who have academic difficulties or who are at-risk (Catts et al., 2015; Chafouleas, Riley-Tillman, & Sugai, 2007; Gresham, Hunter, Corwin, & Fischer, 2013). There are several types of universal screeners available to teachers (see Coyne & Harn, 2006). However, the most widely used method is curriculum-based measurement (CBM; Ball and Christ, 2012; Vander Meer, Lentz, & Stollar, 2005). Regardless of which type of screening is used, frequent and accurate screening is key to early identification and prevention (Gilbert, Compton, Fuchs, & Fuchs, 2012).

Multi-Tiered Instruction and Evidence-Based Intervention

The RTI framework utilizes tiers of support which intensify if students show a lack of progress (Garcia & Ortiz, 2008). Tier 1 involves the universal screening of every student. Students identified as potentially at-risk are provided evidence-based instruction and monitored.

If the interventions are deemed ineffective, the student is moved to Tier 2. Students receiving Tier 2 supports are provided with supplemental evidence-based interventions in small group settings and monitored. Those students who improve may eventually be moved back to Tier 1. Students not responsive to small group interventions are moved up to Tier 3. Students in the third tier receive intensive intervention (Fuchs, Fuchs, & Stecker, 2010; Hoover, 2010).

The tiered supports of RTI focus on using evidence-based intervention and individualizing instruction to address each learner's specific needs (Collier, 2009; Garcia, 2009; Rinaldi & Samson, 2008). As students move into the individualized and more intensive stages of Tier 2 and Tier 3, general education teachers are expected to implement interventions having evidence-based positive effects (Collier, 2009; Garcia, 2009; Sullivan, 2011). Part of the Tier 2 and Tier 3 process is the analysis of the individual student strengths and weaknesses to identify which evidence-based strategies should be implemented. Teachers should ensure interventions are implemented with fidelity and that research indicates the chosen intervention has shown effectiveness for the targeted student needs (Garcia, 2009; Garcia & Ortiz, 2008).

Progress Monitoring

The National Center on Student Progress Monitoring at the AIR defines progress monitoring as a scientifically-based procedure to measure student performance and evaluate instruction effectiveness. Consequently, it is critical that teachers measure student performance frequently to determine whether their instruction is effective. Since there are many progress monitoring systems available, pre-service teachers need to be knowledgeable of the systems available and provided opportunities to practice a variety of progress monitoring tools. In addition to practicing with assessment systems, it is important that pre-service teachers are

trained in how to assess the technical adequacies and inadequacies of progress monitoring measures.

Data-Based Decision Making

Student data should be collected frequently and meticulously (Bayat, Mindes, & Covitt, 2010) because data-based decision making plays a major role in RTI implementation and has been shown to increase student achievement (Firestone & Gonzalez, 2007). Shapiro et al. (2011) suggest data-based decision making is used to match student need to the appropriate tier of intervention, decide when to modify instruction, identify when a student should change tiers, show whether students are responding or not responding to evidence-based interventions, and for deciding if a student should be referred for special education evaluation. Further, the DOE (n.d.) states that data from assessments should drive instruction. Thus, pre-service teachers must be taught how to use data to adapt instruction, evaluate student progress, identify successes, and improve weaknesses. To do so, teacher preparation programs must ensure that training is provided in all aspects of data-based decision making (e.g. data collection, analysis, evaluation, data interpretation).

Theoretical Framework

This research study examines the perceptions and experiences of pre-service teachers with the four main components of RTI during their university-based coursework and field experiences. Piaget's (1970) constructivist, Vygotsky's (1978) social constructivism, and Bandura's (1986) social cognitive theory all provide support for and frame the research questions, design, and methods of this study.

Constructivism and Social Constructivism

The theoretical idea of teaching through real-world applications has been present in education since John Dewey founded a laboratory school utilizing this theoretical framework in the 1890s (Lagemann, 2000). Though the concept has taken many forms over the decades, the basic idea of education being grounded in authentic experience has remained. Constructivism is a theory of knowledge generally attributed to Piaget (1970) who believed learners acquire knowledge from experiences. Constructivists perceive learning as an active process of knowledge construction, not a process of passive acquisition. Expanding constructivism to include a social aspect, Vygotsky (1978) believed learners were integrated into a knowledge community through social interactions. Richardson (1997) explains social constructivist theory as the development of knowledge from activities. In essence, individuals create new understandings from interactions between what an individual already knows and ideas they encounter.

Jonassen (1994) notes both constructivism and social constructivism emphasize knowledge construction, authentic tasks, and real-world learning environments. Since pre-service teachers begin to construct knowledge during their university coursework and continue constructing knowledge in practica settings, both theories are applicable to the training in which the pre-service teachers in this study participate. For example, university coursework includes assignments requiring teacher candidates to observe and present teaching demonstration and participate in group activities, as well as field experiences that include opportunities for candidates to observe and work directly under mentor teachers with students performing authentic tasks in meaningful real-world contexts.

Social Cognitive Theory

Social cognitive theory (Bandura, 1986) is a theory of learning based on the premise that individuals learn by observing others within a social context and through other social experiences. Learning through observation is referred to as modeling. Research by Bandura (1977) found modeling to be an effective teaching tool because learners imitate behaviors of individuals they respect. Schuman and Relihan (1990) suggest the effectiveness of novice teachers is related to the modeling they receive in their preparation programs. The authors propose the importance of modeling instructional techniques that are to be implemented in the field. The finding by Schuman and Relihan support the need for preparation programs to provide pre-service teachers with opportunities to observe and practice concepts they will use in actual teaching situations. Key components of RTI such as screening, progress monitoring, and using data to make educational decisions require both training and practice. In keeping with social cognitive theory (Bandura, 1977; 1986), Benjamin (2011) believes teachers' understanding of RTI is shaped by the knowledge, experiences, and beliefs each individual holds. Thus, providing teacher candidates with skilled mentorship and practice opportunities with the key components of RTI is likely to impact the perceptions and experiences pre-service teachers' have with RTI.

Purpose and Research Questions

The present study is designed to deepen understanding of pre-service teachers' perceptions and experiences with the main components of RTI during their teacher preparation program. Specifically, this is a concurrent mixed-methods study exploring special education and general education (i.e., EC-6, 4-8, and 7-12) pre-service teachers' perceptions and experiences with the main components (i.e. screening, multi-tiered evidence based intervention, progress monitoring, data-based decision making) of RTI. The quantitative and qualitative strands of this

study are of equal importance and the purpose of this study was twofold: 1) to determine whether perception of preparedness differ among pre-services teachers based on type of certification sought, and 2) to identify aspects of university coursework and field experiences that contribute to pre-service teachers' perceived ability to confidently implement the key components of RTI. The results of this investigation have implications for teacher preparation programs regarding how best to present university coursework to prepare pre-service teachers in RTI. Additionally, the study provides information for developing more effective fieldwork expectations across teacher preparation programs. Potential exists for enhancing the literature on teacher preparation by providing the results of pre-service teachers' coursework and field experiences that increase perceptions of readiness to implement RTI and perceived implementation proficiency. Furthermore, results may enrich curriculum development in teacher preparation programs to better prepare pre-service teachers for implementation of RTI as novice practitioners entering the field. There are four research questions:

1. Do perceptions of preparedness to implement the components of response to intervention differ between general education and special education certification seekers?
2. Do perceptions of preparedness to implement the components of response to intervention differ based on level of general education certification?
3. Which aspects of teacher preparation coursework contribute to pre-service teachers' perceived ability to implement the components of response to intervention?
4. Which aspects of field experiences contribute to pre-service teachers' perceived ability to implement components of response to intervention?

Methodological Overview

The current study utilized a non-experimental concurrent mixed-methods research design to gain understanding of pre-service teachers' perceptions and experiences with the four components of RTI during university coursework and field experiences. Quantitative and qualitative data were of equal importance and collected via a researcher developed self-report questionnaire and focus groups representing four separate groups of certification seekers enrolled in the final semester of an undergraduate initial teacher preparation program in a large public university accredited by the Council for the Accreditation of Educator Preparation (CAEP) in the southwestern United States. This study was reviewed and approved by the university Internal Review Board (IRB) to ensure the rights of human subjects were protected prior to data collection. The questionnaire was created based on the meta-framework, *Instrument Development and Construction Validation* (IDCV), developed by Onwuegbuzie, Bustamante, and Nelson (2010). The IDVC process began with conceptualizing the topic through an extensive review of the literature and consulting with local experts which allowed the researcher to identify the constructs of interest. Drafting the initial instrument was a team effort and iterative with question adjustments made based on feedback from local experts including teachers, teacher educators, and in-service teachers who helped evaluate and ensure the instrument effectively captured the topic under investigation. After initial questionnaire creation, a psychometrician evaluated the question construction for common errors and the questionnaire was pilot tested with three pre-service teachers. Next, cognitive interviews were conducted with the three volunteers to obtain feedback on the questionnaire and to assess question clarity and relevance.

Following the pilot test, the questionnaire was once again revised to improve clarity and ensure the instrument represented all facets of the constructs under investigation. Then, a field

test was conducted using the revised instrument with a homogeneous sample, $n = 33$, of student teachers enrolled in other universities across the state. Upon completion of data collection, the quantitative data was cleaned and analyzed to assess content validity, criterion validity, and construct validity of the Likert-type questions. Underlying components were identified using principal components analysis (PCA) to reveal which factors were being measured by which questions. Questions loading on the same factor were aggregated and compared during final analysis. To check for internal consistency of the questions, the correlation between questions loading on the same factor were tested using Cronbach's Alpha (α). As noted in the literature, an α of 0.80 or higher demonstrates adequate internal consistency. Analysis determined the reliability of the responses on this survey to be in the excellent range with an $\alpha = 0.91$.

Method

Participants were recruited two ways. Pre-service teachers not attending class on campus were recruited through their university email. An email recruitment letter and the link to the questionnaire and consent form were distributed to the targeted participants. Additionally, participants were sought through face-to-face recruitment during on campus course attendance. Participation in the researcher created questionnaire was voluntary and no penalties were attached to student non-participation. Informed consent forms were collected prior to questionnaire completion. Responses from participants were kept completely confidential and names were not attached to responses. Four focus group interviews were conducted as a separate component of this study to provide qualitative data as a means of enlarging and deepening understanding of the topic under investigation. The data from the questionnaire, open response questions, and focus groups were analyzed separately. Data sources and methods were

triangulated to yield a better understanding of pre-service teachers' perceptions and experiences with the four main components of RTI (Hussein, 2009).

Participants

A priori power analysis was conducted to determine the desired number of participants for the present study. Stevens (2009) notes a moderate to large sample size provides strong power and recommends using at least a moderate sample size (n = 100). A total of 254 pre-service teachers were identified for participation in this study. Participation criteria was based solely on enrollment in the final semester of the undergraduate initial teacher certification program and not based on age, sex, race, or ethnicity.

There were 186 initial respondents to the questionnaire, however there was immediate attrition of some participants (5.91%, n = 11), meaning no items were answered after consent to participate was obtained. This resulted in a total of 175 respondents having participated in this study. The participation rate was 73.22% of the entire population under investigation. Participants for the qualitative portion of the study were self-selected from the four homogeneous groups of certification seekers (i.e., EC-6, 4-8, 7-12, and special education). Within the sample, 94 participants were EC-6 general education certification seekers, 28 were 4-8 general education certification seekers, 37 were 7-12 general education certification seekers, and 10 were special education certification seekers. Homogeneous focus groups were conducted to account for possible differences in coursework and field experiences related to certification level sought. The special education focus group had 4 participants, the EC-6 focus group contained 4 participants, the 4-8 focus group had 4 participants, and the 7-12 group included 5 participants.

Measures

After review of several existing instruments targeting pre-service teachers' perceptions and experiences with RTI (Barrio & Combes, 2015; Gehrke & Cocchiarella, 2013; Kaplan, 2011; Spear-Swerling & Cheesman, 2012), it was determined that no existing instrument examined the four components of RTI in relation to pre-service teacher perceptions and experiences in coursework and field experiences. For this reason, a questionnaire was developed by the researcher in collaboration with six experts in teacher preparation and six in-service practitioners. The questionnaire contained 28 items targeting pre-service teachers' perceptions of preparedness to implement the components of RTI. The questionnaire items ask pre-service teachers in the final semester of an undergraduate initial teacher certification program to report on their perceptions and experiences with RTI components in relation to their university coursework and field experiences. The questionnaire consisted of five demographic questions, 20 Likert-type scale items, as well as three open response questions. Likert-type scale items ask respondents to note the extent to which they agreed or disagreed with various statements related to RTI and RTI components, for example, "How confident do you currently feel using data to make educational decisions?" Likert-type questions were forced choice by offering respondents choices of "*not at all confident*," "*somewhat confident*," "*confident*," and "*very confident*." Likert-type questions were coded 1-4, with 1 denoting "*not at all confident*," 2 representing "*somewhat confident*," and so forth.

Qualitative data was obtained with the three open-ended question at the end of the questionnaire. The rationale for inclusion of open response items was to gather qualitative data which afforded participants an opportunity to share insights about their pre-service RTI preparation and provide depth of understanding not available through survey questions. A field

test with pre-service teachers attending universities across the same state (n = 33) was conducted to measure reliability of the questionnaire.

Qualitative data were also obtained through four focus groups. Participants for the focus groups were recruited from volunteers who self-select to participate in the focus groups at the end of the questionnaire. The invitations to participate in the focus group required questionnaire respondents to enter their contact information at the end of the questionnaire. Contact information provided at the end of the questionnaire was not connected with the questionnaire responses to preserve anonymity. Consent for participation was obtained prior to the start of each focus group. No personally identifying information was collected during the focus groups in an effort to encourage open and honest responses from participants. The focus group questions were semi-structured and formulated for open-ended responses to obtain information regarding pre-services teacher experiences with each of the four components of RTI (i.e., screening, tiered evidence-based intervention, progress monitoring, data-based decision making) during university-based coursework and during field experiences. The questions expanded on information contained in the questionnaire to further understand participants' experiences with the components of RTI. For example, "Tell me about your field experiences with progress monitoring."

Data Analysis

A mixed-methods research design was used to comprehensively answer the research questions under investigation. Data were analyzed using factor analysis, descriptive statistics, analysis of variance (ANOVA), and thematic analysis. Factor analysis was performed to evaluate measurement validity. Factor analysis was run three times using one factor, two factors, and three factors. A one factor solution was best supported based on a one factor eigenvalue of 50.91

and a clear break in the scree plot (See Table 2 and Figure 1). Cronbach's alpha was used to evaluate the reliability of the responses on the questionnaire. A minimum range of .70 is desirable for measures in development that are used for research purposes (Henson, 2001). The questionnaire used in the present study is in the excellent range at .95 for all 20 items.

Table 2

Eigenvalues

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.18	50.91	50.91	9.81	49.04	49.04
2	1.53	7.63	58.54	1.09	5.44	54.48
3	1.46	7.30	65.84	1.03	5.13	59.61
4	.83	4.17	70.00			
5	.74	3.69	73.69			
6	.69	3.45	77.13			
7	.61	3.05	80.19			
8	.55	2.75	82.94			
9	.48	2.39	85.33			
10	.43	2.13	87.45			
11	.38	1.88	89.34			
12	.34	1.72	91.05			
13	.31	1.55	92.60			
14	.29	1.47	94.07			
15	.28	1.37	95.45			
16	.24	1.21	96.66			
17	.20	.99	97.65			
18	.19	.95	98.60			
19	.16	.82	99.41			
20	.12	.59	100.00			

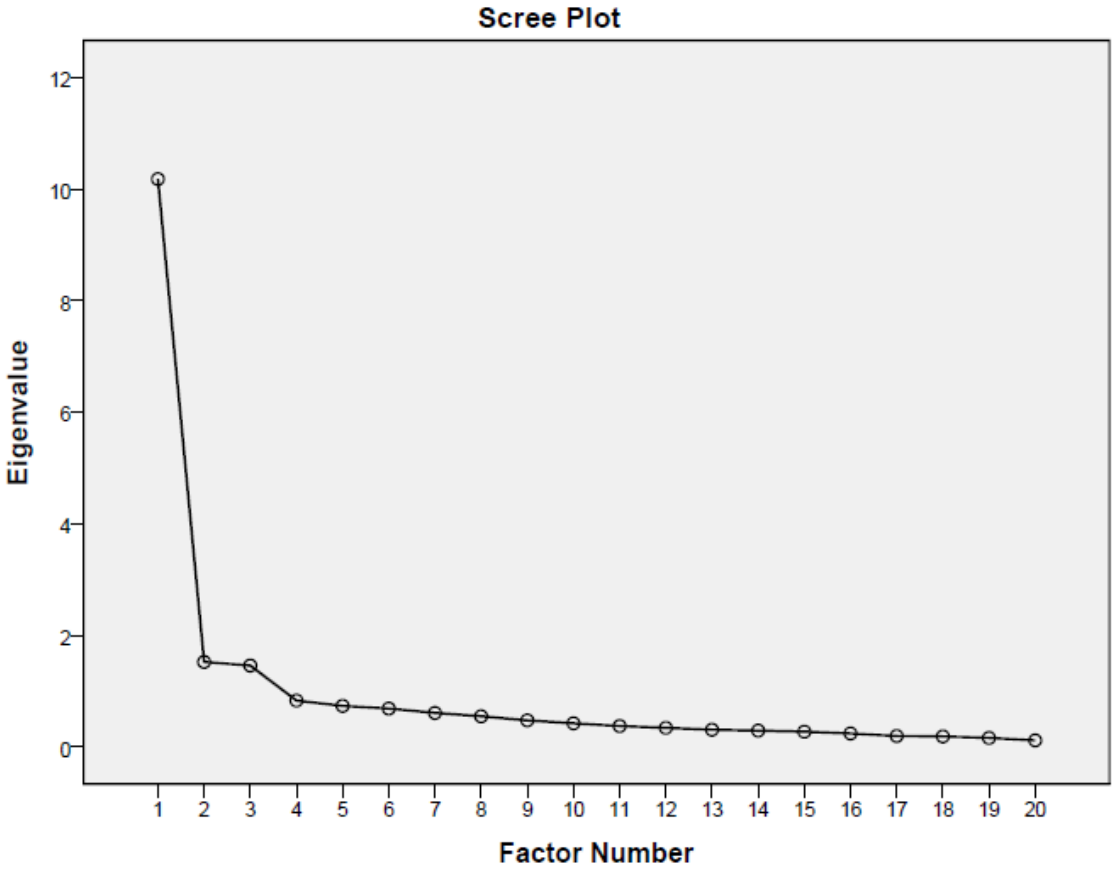

Figure 1. Scree plot

Descriptive statistics including means, standard deviations, skewness, and kurtosis were used to analyze Likert-type scale questionnaire items. The participant demographic data were collected from the questionnaire and given an appropriate value before dichotomously coding gender and certification sought (EC-6, 4-8, 7-12, or special education). Descriptive statistics assisted with detecting sample characteristics that may have influenced study findings (Thompson, 2009).

An analysis of variance (ANOVA) was run to determine if significant group differences existed between the mean scores of questionnaire participants on the full scale. ANOVA is a statistical technique used to compare the means of two or more groups. Using a one-way ANOVA helped control Type I error for both research questions under quantitative investigation

(Tabachnick & Fidell, 2013). ANOVA allowed the researcher to detect when groups differed based on type of certification sought. Before running the one-way ANOVA, the data being analyzed was checked to ensure no ANOVA assumptions were violated. Specifically, each group sample was drawn from a normally distributed population, all populations had a common variance, all samples were drawn independently of each other, and within each sample, the observations are sampled randomly and independently of each other. Checking to verify ANOVA assumptions were not violated was necessary to ensure obtained results would be valid. Post hoc power analysis was conducted which resulted in a power of 0.41.

The qualitative data from the open response questions and focus groups were categorized and coded based on themes that emerged from each group of respondents (i.e., EC-6, 4-8, 7-12, and special education). Transcripts were analyzed using the six-step Thematic Analysis (TA) approach developed by Braun and Clarke (2006). TA was selected as the qualitative data analysis approach because it seeks to identify, describe, and analyze patterns in qualitative data (Clarke & Braun, 2013). The patterns found in the data are known as themes which become apparent through a process of data reduction during coding (Grbich, 2013). Sandelowski and Leeman (2012) describe a theme as a clear integration of distinct pieces of data that create the final findings. Furthermore, TA was selected due to its flexibility and potential to provide a rich detailed account of data (Braun & Clarke, 2006). The first phase of analysis involved verbatim transcription of the four focus group recordings to ensure all responses were included for analysis. The researcher and two assistant researchers read the transcripts several times to become very familiar with the data before generating initial codes. The third step involved searching for themes. The researchers looked for both explicit and implicit ideas contained in the data. Then, the researchers reviewed the themes to ensure they fit and were complete. Once the

themes had been sufficiently reviewed, the researchers defined and named the themes using examples from the data (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006).

The results of the quantitative and qualitative data were combined to provide holistic answers to the research questions under investigation. Inferences from results of the quantitative and qualitative studies were triangulated and synthesized to form meta-inferences regarding the perceptions and experiences pre-service teachers had with the components of RTI during their teacher preparation (Teddlie & Tashakkori, 2009; Venkatesh, Brown, & Bala, 2013). The use of triangulation to synthesis multiple sources of information gathered during a mixed-methods study enhances the quality and credibility of a researcher's conclusions and recommendations (Hussein, 2009; Institute of Medicine, 2014). Thus, data was analyzed and interpreted for a complex, mixed methods evaluation of the quantitative results and qualitative findings. Additionally, the National Research Council (2002) states that multiple research methods are needed because lines of inquiry can rarely be answered completely with one methodological approach. Greene, Caracelli, and Graham (1989) agree, suggesting using mixed-methods to enhance and clarify the results of one method with the results of the other.

Results

The present study produced both quantitative results and qualitative findings related to the perceptions and experiences of 169 pre-service teachers with the four main components of RTI during their university-based coursework and field experiences. The analysis revealed differences between general education certification seekers at each certification level compared with special education certification seekers. Only minimal differences were found between the general education certification seeking groups. Specifically, slight differences were identified between EC-6 compared with 7-12 and between 4-8 compared with 7-12.

Quantitative Results

Prior to analysis, data was cleaned and assumption checks were performed. The 175 questionnaire responses in this study were screened and evaluated for missing data according to the procedures outlined by Tabachnick and Fidell (2013). Missing data were random in this study and minimal, at only 3.4% missing. Therefore, incomplete responses were deleted. Consequently, the final sample for the quantitative portion of this study was $n = 169$ with representatives from special education and all certification levels of general education. The deletion of missing data is known as listwise deletion. Listwise deletion excludes cases with missing data on any variable used in an analysis (Rubin, Witkiewitz, St. Andre, & Reilly, 2007). All ANOVA assumptions were met. Each group sample was drawn from a normally distributed population which was checked with skewness and kurtosis of the scale shown in Table 4. All populations had a common variance. Homogeneity was supported using Levene's test ($p = .64$). See Table 3 for Levene's test of equality of error variances. All samples were drawn independently of each other, and within each sample, the observations are sampled randomly and independently of each other. Post hoc power analysis was conducted which resulted in a power of 0.41.

Table 3

Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
.57	3	165	.64

Descriptive statistics provide a means of evaluating the central tendency as well as showing how far the data was spread out. The sample size of the current study was $n = 169$. Within the sample, 55.62% were EC-6 general education certification seekers, 16.6% were 4-8

general education certification seekers, 21.9% were 7-12 general education certification seekers, and 6% were special education certification seekers. The 20 questionnaire items were coded on a 1 to 4 scale meaning the possible range of responses could have been as low as 20 and as high as 80. The mean was 45.4, with a range of 22-78. The standard deviation was SD = 12.01. The skewness of the full scale was .45 with a standard error of .19. Table 3 provides descriptive statistics for the full scale.

Table 4

Full Scale Descriptive Statistics

	N	Minimum	Maximum	Mean	SD	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Full Scale	169	22.00	78.00	45.39	12.01	.45	.19	-.10	.37

Comparison Between Groups

To address the research questions: "Do perceptions of preparedness to implement the components of response to intervention differ between general education and special education certification seekers?" and "Do perceptions of preparedness to implement the components of response to intervention differ based on level of general education certification?", a one-way ANOVA was used to analyze the differences between the means of the four IVs. The analysis results showed general education certification levels, EC-6 and 7-12 with a $p < .001$ and 4-8 with a $p < .002$ compared to special education certification seekers. These results are statistically significant and indicate that differences in perceptions of preparedness to address the components of RTI do exist between each general education group compared to the special education group. Cohen's *d* provides effect sizes for the between group differences. The effect sizes for special education compared to EC-6 is $d = -1.41$, special education compared to 4-8 is *d*

= -1.20, and special education compared to 7-12 is d = -1.74. These effect sizes show that all general education groups were more than one standard deviation lower than the special education group.

Eta-squared (η^2) is a measure of effect size for use in ANOVA. The one-way ANOVA found 16% of the variance in the group comparisons, area of certification sought, is explained by the model, F_3 =10.10, $p < .001$, η^2 =16. Thus, area of certification sought explains 16% of the variance in respondent answers on the scale. The ANOVA table is shown in Table 5. According to Pierce, Block, and Aguinis (2004), interpretation of η^2 using Cohen's effect rule criteria of .02 ~ small, .13 ~ medium, and .26 ~ large, places the special education certification seekers group compared with each of the general education certification seeker groups (i.e., EC-6, 4-8, 7-12) effect size in the medium range.

Table 5

ANOVA Table

Source	*df*	Mean Squared	*F*	*P*	η^2
Model	3	1252.97	10.10	<.001	.16
Error	165	124.07			
Total	168				

Results indicate there is not a significant difference among any of the general education groups (i.e., EC-6, 4-8, and 7-12). No comparison of the general education groups had a $p < .05$. Therefore, these results are not statistically significant and indicate that differences in perceptions of preparedness to implement the components of RTI do not exist among the general education certification groups. However, non-statistically significant results may be due to sample size. However, the effect sizes for EC-6 compared to 7-12 and 4-8 compared with 7-12

are $d = 0.44$ and $d = 0.57$, indicating that there may be differences that where not detected. Multiple comparisons of the dependent variable (IV), area of certification sought is presented in Table 6.

Table 6

Multiple Comparisons of the Dependent Variable

Area of Certification Sought	Area of Certification Sought	Mean Difference	*SE*	95% Confidence Interval		*p*-value	Cohen's *d*
				Lower Bound	Upper Bound		
EC-6	4-8	-1.78	2.40	-8.01	4.44	.88	-0.16
	7-12	4.88	2.16	-.73	10.49	.11	0.44
	SPED	-16.72	3.70	-26.34	-7.10	<.001	-1.41
4-8	7-12	6.67	2.79	-.57	13.91	.08	0.57
	SPED	-14.94	4.10	-25.59	-4.29	.002	-1.20
7-12	SPED	-21.60	3.97	-31.91	-11.30	<.001	-1.74

To more closely examine the perceptions of pre-service teachers regarding their confidence in implementing the components of RTI, the questionnaire asked students to rate how confident they feel with RTI. All responses were coded from 1 to 4 with 1 = "*not at all confident*", 2 = "*somewhat confident*", 3 = "*confident*", and 4 = "*extremely confident*". Table 7 presents the mean of each certification type in response to questions concerning perceived ability to implement RTI and RTI components. The results show special education seekers had higher mean perceived confidence levels than general education certification seekers and 7-12 certification seekers had the lowest perceived confidence in their ability to implement RTI.

Table 7

Means of Responses to Confidence Items by Certification Sought

Questionnaire Item	EC-6	4-8	7-12	SPED
Confidence using screenings to make educational decisions for students	2.13	2.28	2.0	3.0
Confidence using evidence-based interventions with students	2.19	2.45	2.08	2.73
Confidence using progress monitoring tools to monitor student progress	2.25	2.38	2.11	2.9
Confidence using data to make educational decisions for students	2.39	2.66	2.05	3.0
Confidence you can implement RTI in your own classroom next year	2.19	2.34	1.97	3.0

Note. Certification Sought: EC-6 general education (*n* = 94), 4-8 general education (*n* = 28), 7-12 (*n* = 37), special education (*n* = 10)

In order to gain understanding of pre-service teachers' preparation in the components of RTI, the questionnaire asked students to select how much university-based coursework they received in RTI. Table 8 presents the mean perceived coursework received with response choices of *"none"*, *"little"*, *"some"*, or *"a lot"* of training in RTI and the RTI components. University-based coursework was described to include activities such as readings, lectures, and assignments. "*None"* was operationalized to represent zero coursework, *"little"* indicated less than three class sessions or assignments, *"some"* was operationalized to represent 3-6, and *"a lot"* was operationalized to signify 7 or more sessions that included readings, lectures, or assignments on the topic. All responses were coded on a 1-4 scale from least to most. Once again, the results indicate special education pre-service teachers perceived receiving more training than all groups

of general education pre-service teachers and 7-12 certification teachers reported receiving the least amount of university-based coursework.

Table 8

Mean Amount of RTI Training in Coursework by Certification Sought

Questionnaire Item	EC-6	4-8	7-12	SPED
RTI training received across all university coursework	2.38	2.41	2.0	3.5
Instruction on screenings	1.82	1.83	1.58	2.6
Instruction on evidence-based interventions	2.2	2.07	1.79	2.9
Instruction on progress monitoring	2.32	2.24	2.11	3.2
Instruction on data-based decision making	2.15	2.14	1.84	3.1

Note. Certification Sought: EC-6 general education (n = 94), 4-8 general education (n = 28), 7-12 (n = 37), special education (n = 10)

To obtain data on pre-service teachers' fieldwork experiences with the components of RTI, the questionnaire asked students about their field experiences. Table 9 presents the mean perceived amount of field experiences with response choices of *"none", "little", "some",* or *"a lot"*. Field experiences were described to include all field-based activities such as practicum placements, student teaching, internships, or staff development sessions. As with the questionnaire items about coursework, *"None*" was operationalized to represent zero fieldwork, *"little"* indicated less than three field opportunities, "some" was operationalized to represent 3-6, and *"a lot"* was operationalized to signify 7 or more field experiences with RTI. All responses were coded on a 1-4 scale from least to most. The results indicate special education pre-service teachers perceived having more field experiences compared to all of the general education

groups. Yet again, among the general education certification seekers, 7-12 pre-service teachers reported having the least number of field experiences with the components of RTI.

Table 9

Mean Amount of RTI Field Experiences by Certification Sought

Questionnaire Item	EC-6	4-8	7-12	SPED
RTI across all field-based experiences	2.28	2.24	1.89	3.6
Field experiences with screenings	1.73	1.9	1.68	2.7
Field experiences with implementing evidence-based interventions	2.14	2.62	2.08	3.3
Field experiences with progress monitoring	2.34	2.45	2.21	3.1
Field experiences with data-based decision making	2.26	2.62	2.08	3.1

Note. Certification Sought: EC-6 general education (n = 94), 4-8 general education (n = 28), 7-12 (n = 37), special education (n = 10)

Qualitative Findings

The lead researcher in collaboration with two assistant researchers analyzed verbatim transcripts using thematic analysis (TA) to obtain themes (Braun & Clarke, 2006). TA was used to identify patterns and meaning in the qualitative data set. Three open response questions asked respondents to provide additional information on their RTI preparation. Specifically, what did they wish had been included or more deeply covered in their coursework and field experiences as well as details about the coursework and field experiences they believe strengthened their ability to implement the components of RTI. Not all participants provided responses to the open response questions (N = 110).

In addition to the open response items, four focus groups were conducted. All four focus groups had four participants with the exception of the 7-12 group which had five participants.

The data sets from the questionnaire and the focus groups were analyzed according to the Braun and Clarke (2006) framework by three researchers. The responses were organized by group and the researchers familiarized themselves with the data. The researcher and two assistant researchers generated initial codes before searching for themes. Themes were individually identified by each researcher before the researchers met to jointly share, compare, discuss, and reach consensus on themes. The researchers reviewed the themes to ensure themes fit and were complete. Once the themes had been sufficiently reviewed, the researchers defined and named the themes using examples from the data.

Open Response Questions

All participants completing the questionnaire were provided an opportunity to respond to three open response question: 1) Is there anything related to RTI that you wish had been included or more deeply covered in your university coursework?, 2) Is there anything related to RTI that you wish had been included or more deeply covered in your field experiences?, and 3) Please provide details about the coursework and field experiences you believe strengthened your ability to implement the components of RTI. Three themes emerged from the responses.

Theme 1: Desire for a Deeper Understanding of RTI

Regarding university-based coursework, one student seeking special education certification stated, "I was very well trained in my coursework." However, most would have liked more classroom experiences doing RTI activities. An EC-6 certification seeker stated, "We simply went over the steps" and one 4-8 respondent wrote, "More of everything." This sentiment was repeatedly mentioned with similar responses. For example, an EC-6 respondent stated, "I felt like it was something that was just mentioned." The pre-service teachers seeking 7-12 certification reported receiving no or very little coursework on RTI. For instance, "RTI was

never fully explained, much less given time in class to learn how to implement it." and "I don't recall ever discussing it in my course as a student." Participants seem to have an understanding of the importance of RTI as evidenced by their desire to have more coursework on the topic, "I think we need a whole RTI class," wrote one 4-8 certification seeker.

Theme 2: Appreciation of Implementation Opportunities

In regard to field experience comments, responses centered around the benefits of authentic experiences. Special education certification seekers reported more field experiences than general education certification seekers. A special education certification seeker wrote, "I had a lot of field experience with RTI." In contrast, a 7-12 respondent wrote, "I wish I had more experience implementing RTI in my classroom," a feeling shared by respondents across all levels.

Theme 3: Value of Mentorship

Mentorship was noted in several responses. For example, an EC-6 certification seeker stated, "I wish my mentor teacher had walked through all of her instructional decisions based on her RTI data." Another EC-6 student would have appreciated opportunities to observe more teachers during field experiences. Finally, one 7-12 pre-service teacher mentioned, "I would have liked to attend trainings and meetings." In regard to individual components of RTI, screening, progress monitoring, and data-based decision making were all mentioned, with students expressing a general desire to have received more field experiences observing and implementing those components.

Themes from the open response questions did not vary based on type of certification sought. A general desire for more and deeper coverage of RTI and the individual components of RTI in university coursework and during field experiences was evident across all certification

groups. The desire for more training in RTI is in keeping with Barrio and Combes (2015) who noted the general education pre-services teachers in their study expressed concerns about the limited amount of RTI training in their teacher preparation program. Additional findings from Barrio and Combes revealed a perceived lack of field experiences affording pre-service teachers opportunities to observe in-service teachers "go through the RTI process." The researchers concluded pre-service teachers needed further preparation in the RTI model and its components.

Focus Groups

Four focus groups were conducted to answer research questions 3) Which aspects of teacher preparation coursework contribute to pre-service teachers' perceived ability to implement the components of response to intervention? and 4) Which aspects of field experiences contribute to pre-service teachers' perceived ability to implement components of response to intervention? Additionally, the focus groups provided a deeper understanding of the quantitative results of this study that addressed research questions 1) Do perceptions of preparedness to implement the components of response to intervention differ between general education and special education certification seekers? and 2) Do perceptions of preparedness to implement the components of response to intervention differ based on level of general education certification?

During each focus group, participants were asked about their coursework in each RTI component and then asked about their field experiences with each RTI component. In searching for answers to the research question, three relevant themes emerged. The first theme centered around awareness and understanding of RTI and RTI components. Theme two focused on the appreciation of hands-on coursework activities and authentic field experiences. The final theme from the focus groups dealt with the role of teacher educators and mentor teachers in solidifying perceptions of confidence or ability.

Theme 1: Awareness and Understanding of RTI

The theme awareness and understanding of RTI describes comments made about a lack of understanding of screening, multi-tiered intervention, progress monitoring, data-based decision making, or RTI in general. At the conclusion of the 7-12 focus group, one participant stated terminology was an issue, "I definitely did not know what it was. Now that we have talked about it out loud I definitely know that we have been doing it and that it's something I do in the classroom." Another 7-12 participant agreed saying, "I sat in on an RTI meeting and I remember I was like, 'What is an RTI?'." Similar situations occurred in the EC-6 and 4-8 focus groups, with participants repeatedly asking for explanations and examples of the RTI components. It is worth noting, that the participants in the special education focus group did not request definitions or clarification related to the components of RTI.

Theme 2: Appreciation of Coursework Activities and Field Experiences

Participants in all four focus groups expressed either an appreciation for having received coursework and field experiences with the components of RTI or a desire to have had more experiences. In regard to coursework in screening, tiered interventions, and progress monitoring, the EC-6 focus group described learning about it on a superficial level, the 4-8 group mentioned specific coursework on those components, the 7-12 group discussed learning about formative assessments, and the special education focus group members provided detailed description of assignments and activities with those components. One participant in the special education focus group stated, "We've only seen it in the special education courses, so I think it would be nice to see it in general ed. because I know it is important there too." Another member of that focus

group agreed recommending that RTI should be incorporated more in general education coursework.

The responses about coursework related to data-based decision making were mixed. Again, the special education students recalled assignments and activities related to that component. Somewhat surprisingly, the EC-6 and 4-8 focus group members all claim to have received no hands-on activities associated with data-based decision making. An EC-6 participant noted,

> They never - we never saw any data. No one ever brought out any example data or data at all so we never saw any data until we got to student teaching. They would talk about, you will do this, but we never actually did any of it or saw any of it, just, hey you're gonna do this at some point.

Unexpectedly, the participants in the 7-12 group recalled analyzing student exam scores which made them feel prepared for their fieldwork. For example, a participant stated, "I was really encouraged when I came here and got to talk to some of the teachers here and realized that they did the same thing, only like for state mandated test and other things like that."

Field experiences with the components of RTI were noted across all groups and participants. Generally, all focus groups members had field experiences with the components of RTI. However, field placements and access to students of varying ability levels were sometimes limited. Participants expressed a desire to work with a wide range of ability levels and grade levels. Focus group members with the most diverse field experiences emphasized the benefits of the experiences and those participants with limited experiences felt broader exposure to a variety of students and settings would have increased their confidence with RTI. These qualitative findings related to field experiences align with the literature on teacher preparation which

indicates field experiences have the highest impact on pre-service teachers' professional preparation (Conderman, Johnston-Rodriguez, Hartman, & Walker, 2012).

Theme 3: Role of Teacher Educators and Mentor Teachers in Solidifying Perceptions of Confidence or Ability

Perceived knowledge and expertise of instructors and mentor teachers was discussed in all four focus groups. The focus group participants noted benefits from seeing high quality instruction in authentic settings. For instance, one 7-12 participant shared that observing in-practice teachers implement RTI was beneficial, "I really enjoyed seeing teachers and how they do things." A participant in the EC-6 group mentioned a professor bringing screeners to class and allowing students to practice giving the assessments and interpreting the results, stating, "It was really interesting to see how the different tests worked." During the same focus group, while discussing progress monitoring, another participant brought up lack of professor support and low professor standards and expectations, "He didn't really teach us anything. We got very limited data to work with, so it was really ineffective for teaching us what to do with the data."

The focus group participants spoke of professors and mentor teachers as being resources for tiered instruction and evidence-based interventions. One special education focus group participant noted pre-service teachers felt comfortable asking for assistance from professors, "We could go and say, 'Hey, my students are struggling with this, this is what I saw while doing CBMs. Can you help me pick an intervention?'." A 7-12 focus group participant had a similar experience with a mentor teacher regarding evidence-based interventions and stated,

> I think what has been really helpful is my mentor teacher. He has given me different tools so that we can help those students catch up to the rest of the students. He wanted to be there for me and supported me with whatever I needed, but also backed off and kind of

let me run the classroom. He gave me the opportunity to put those things that I have learned into practice.

Finally, during a discussion of recommendations to improve field experiences with the RTI components, a 4-8 focus group participant discussed the importance of mentor teachers. The participant stated, “I definitely think that a good mentor teacher makes a huge difference.” Another participant agreed, “Participant 4’s mentor teacher is phenomenal.” The participant went on to state that opportunities to observe the ‘phenomenal’ mentor teacher were provided, however, “It’s not the same as getting involved and having that mentor teacher force you to do things you’re not comfortable with to grow.” These comments demonstrate pre-service teacher awareness of the difference a knowledgeable mentor with expertise in the components of RTI can make during field experiences.

The pre-service teachers who participated in the focus group mirrored the feelings of the respondents who completed the open response items on the questionnaire. Participants in both groups seemed to have an awareness of the value both coursework and fieldwork have in preparing them in RTI and its components. This is evidenced by an EC-6 certification seeking pre-service teacher who stated, “The coursework taught me about RTI, but the field experiences taught me all of RTI and how to implement.”

Mixed-Methods Meta-Inference

The results of the quantitative and qualitative strands of this study were of equal importance and combined to provide holistic answers to the four research questions under investigation. Inferences from results of both strands of the study were integrated to form meta-inferences based on the framework put forth by Teddlie and Tashakkori (2009). Meta-inferences were reached by triangulating the quantitative results and qualitative findings. The results from

the quantitative portion of the present study found a difference between the perceptions of the special education certification pre-service teacher group compared with all three groups of general education certification seekers ($n = 169$, $p < .001$). The themes that emerged from the open response questions and the focus groups also revealed differences between special education pre-service teachers and general education pre-service teachers in regard to their experiences with the components of RTI. The focus group with the special education seekers confirmed the quantitative results. The special education seekers reported having more instruction in the components of RTI as well as more opportunities to implement the components during field experiences.

The quantitative results and qualitative themes (e.g., awareness of RTI components, quality of coursework and field experiences, and role of teacher educators and mentor teachers) reinforce the need for preparation programs to ensure pre-service teachers are provided thorough instruction on the RTI components. Classroom instruction should be in combination with real-world field experiences that provide pre-service teachers opportunities to implement the RTI components under knowledgeable mentor teacher supervision. Pre-service teacher comments demonstrated an awareness of the importance of both university-based coursework and field experiences in the teacher preparation program. A participant in the 4-8 focus group commented on coursework in RTI and stated:

> I would have liked to have these things in the class but I would have also liked to have a reason to care about them. I don't want - mean that to sound bad, but what I mean by that is that as a sophomore in college, my priority is not - let me focus on how I can use RTI. Now that I am in the classroom student teaching, I realize how important it is, but that's

because I've experienced it. So until I had something that meant something to me, that's when I cared.

Focus group participants also agreed on the value of strong mentorship. For example, in the 4-8 focus group: "My teacher is very intent on making sure that I know how to do everything because the school is very RTI conscious and makes sure that their kids are exactly where they need to be." Participants in the special education focus group concurred about the benefits of having strong mentoring and viewed mentor teachers as resources, "I would sometimes go to my mentor teacher and just say, 'Hey, this is what I've seen, I'm going to do this. Do you think that's gonna be effective?'."

Teacher educators who spent class time on the components of RTI were valued by students. One participant in the EC-6 focus group discussed a professor who provided opportunities for students to practice using screening and progress monitoring instruments in class. In response, two other participants replied that no such opportunities were provided in their courses, "We had zero – I mean I felt unprepared until student teaching."

In conclusion, an inference can be made that differences exist in perceptions and experiences with RTI between special education certification seekers and general education certification seekers. Differences exist in the perceived confidence with the components and in the amount of coursework and the number of field experiences received. Special education seekers noted more confidence and training compared to the three general education groups. However, all focus group participants seemed to understand the importance of both coursework and field experiences in learning to implement the components of RTI. A student in the 4-8 focus group commented on the need for tying coursework and field experiences together: "An interesting assignment would be to document every accommodation that you gave this week."

Overall, no participant in any of the four focus groups or respondents to the open response questions stated they wished there had been less instruction or emphasis on the components of RTI. Even special education certification seekers who felt confident in their abilities related to the RTI components wished for more real-world experiences, with a wider range of student ability levels, had been provided. A 7-12 focus group member expressed a similar thought, "I wish screening and working with data had been modeled better, but the best experience is teaching and getting out there and doing it because in the classroom it doesn't really click until you get in the field."

Discussion

The purpose of this study was to determine whether perception of preparedness differ among pre-services teachers based on type of certification sought and to identify aspects of university coursework and field experiences that contribute to pre-service teachers' perceived ability to confidently implement the key components of RTI. A review of literature by Barrio, Lindo, Combes, and Hovey (2015) found that the vast majority of the literature on RTI, or one of its main components, is presented in special education publications, with only ten publications identified in general education peer-reviewed journals. The lack of emphasis on this topic in general education journals is concerning given the results of this study. General education certification groups (i.e., EC-6, 4-8, and 7-12) are completing their teacher preparation programs feeling less confident and having received less coursework and fewer field experience opportunities compared to the special education seeking group.

Existing literature has investigated pre-service and in-service teacher concerns related to RTI (Barrio & Combes, 2015; 2010; Spear-Swerling & Cheesman, 2012; Stuart et al., 2011; Tillery et al., 2010) and studies have examined pre-service teachers field experiences with RTI or

individual components of RTI (Al Otaiba, Lake, Greulich, Folsom, & Guidry, 2012; Conderman, Johnston-Rodriguez, Hartman, & Walker, 2012; Eisenhart, Besnoy, & Steele, 2012). However, there has not been an examination of pre-service teacher perceptions and experiences with the four main components of RTI in relation to coursework and field experiences. Thus, the results of this mixed-methods study contributes to the current literature by providing insights about pre-service teacher perceptions of each component of RTI as well as revealing pre-service teachers' experiences with the components during their university-based coursework and field experiences.

The differences in perceptions between the special education group and the three general education groups was not surprising. The special education group rated their confidence in using RTI and the four main components of RTI higher than all the general education groups. Higher confidence levels are likely a result of more coursework and field experiences with the components of RTI that the special education seekers reported. The Likert-style questionnaire results were confirmed by the comments to the open response questions and during the focus group discussions. Special education seekers referred to more university training in RTI and more fieldwork observing and implementing RTI than any of the general education focus groups.

One explanation for these differences in perceptions and experiences could be related to the emphasis placed on RTI by teacher educators. The special education focus group members noted professors spending time on the components of RTI, providing in-class experiences to practice and observe the components, and their professors being resources during fieldwork. On the other hand, comments made during the three general education focus groups indicated a general lack of emphasis on RTI and its components during coursework. The 7-12 certification seekers had the lowest perceived confidence in the RTI components and reported the lowest

amount of coursework and field experiences compared with all other groups. Three of the five participants in the 7-12 focus group noted their professors tended to "brush" over RTI and its components. One participant quoted an instructor as having said, "Yeah, we're brushing over this. You're going to have to come back to this at some point. The amount of time we need to do it - we don't." This lack of emphasis on RTI in courses general education seekers take may explain the lower perceived confidence they feel regarding implementing RTI components. However, since this study did not collect data on instructor knowledge and expertise related to the components of RTI, it is unclear whether the lack of emphasis is an isolated instructor issue or if it is a general issue across general education course instructors.

One theme that emerged from the qualitative strand of this study was a lack of awareness and understanding of the main components of RTI and RTI in general by general education certification seekers. It is unclear whether lack of participant knowledge of RTI and RTI terminology was due to lack of recall, lack of instruction, or insufficient exposure to RTI terminology. Nonetheless, once the terminology was clarified and examples provided, pre-service teachers in the three general education focus groups were able to discuss their experiences with the components of RTI. However, it was evident that they were not comfortable using the terminology and often spoke of RTI in relation to special education. This misunderstanding of RTI and its purpose is concerning because the RTI framework is intended to be a preventative intervention approach for supporting struggling students. Although many teacher educators can relate to time pressure associated with covering all the necessary content in their courses, students should not be leaving their teacher preparation courses lacking basic knowledge of RTI. Findings from this study reinforce the need for teacher educators to take the time to cover the RTI components because pre-service teachers encountered RTI during their

student teaching placements. Results show that pre-service teachers not only know they *need* to learn about the components of RTI and authentically implement the components, they *want* to learn about the components and practice implementing the components during fieldwork. Figure 2 is a conceptual map of the qualitative findings from this study showing the aspects of coursework and field experiences found to positively impact pre-service teacher understanding of the components of RTI and in turn increase implementation confidence.

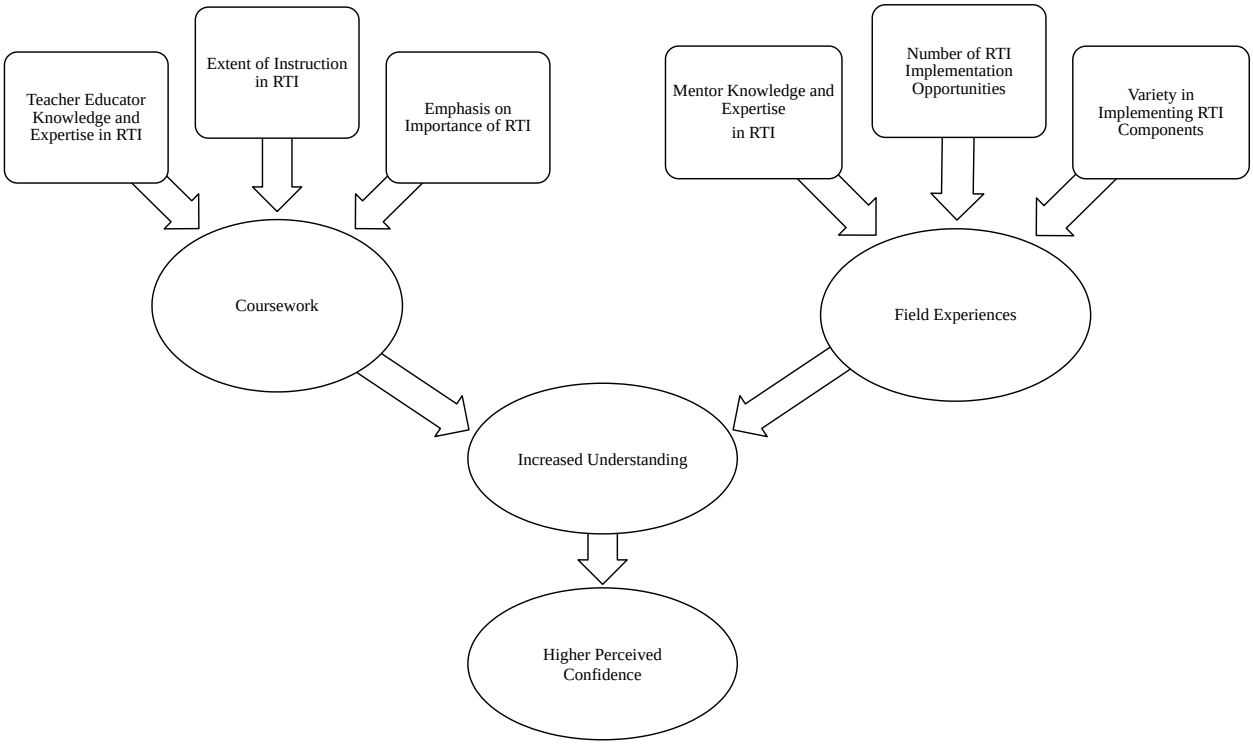

Figure 2. Conceptual map of aspects of training that increase perceived confidence

Limitations

There are limitations associated with this study. This study only included pre-service undergraduate students enrolled in the final semester of an initial teacher certification program from one university's College of Education (n = 169). This limits the generalizability of this study. As such, this study should be viewed as exploratory with the goal of conducting a larger national study in the future. Furthermore, although this study provides valuable information

about pre-service teachers' perceptions of RTI and the coursework and field experiences they have with RTI components, more research is needed to identify the most effective instructional methods for teaching pre-service teachers about the components of RTI. Also, no option was presented to participants on the questionnaire about instructor or mentor knowledge and expertise related to their RTI training. This is a limitation of the current questionnaire and future iterations may benefit from inclusion of questions related to perceived knowledge and expertise of university instructors and perceived knowledge and expertise of fieldwork mentors. A final limitation of this study is that participants may not have been fully honest in their answers on the questionnaire or during the focus groups. It is conceivable that participants may have answered questions in a socially desirable manner.

Conclusion and Implications

As previously stated, the three general education certification seeking groups in this study are completing their initial teacher certification program with lower perceived confidence in their ability to implement the components of RTI compared to the special education certification group. In regard to the general education groups, although no statistically significant differences were noted in preparedness, ANOVA revealed medium effect sizes between the EC-6 group compared to the 7-12 group (Cohen's d = .44) and the 4-8 group compared to the 7-12 group (Cohen's d = .57). One explanation for the difference may be related to the fact that EC-6 and 4-8 certification seekers are required to take an extra special education course as part of their training. The course, Strategies to Support Diverse Learners in General Education, covers RTI and has a practicum component which provides RTI implementation opportunities.

The 7-12 certification group reported the lowest confidence levels with the components of RTI, the least coursework in RTI, and the fewest field experiences with RTI, which is

troubling since the RTI framework is intended to assist students at-risk of failure. By the time students reach secondary education, those students who struggle academically and behaviorally are not only at-risk of failing, they are at-risk of dropout. For that reason, it is imperative that pre-service teachers in the upper grades know how to screen students, be well versed in tiered evidence-based instruction, how to monitor student progress, and effective at making educational decisions based on student data. This is not to say that that teachers at all levels do not need to be well-versed in the components of RTI, quite the opposite. Teachers in the elementary and middle grades must be able to implement the components of RTI effectively for early identification and intervention with students experiencing difficulties so struggling students receive the help they need to be successful.

Teacher preparation programs must strive to educate and train pre-service teachers to enter the field feeling confident in their ability to perform tasks associate this the job for which they have been trained. The results of this study suggest a need for more research in this area to better understand how best to train pre-service teachers in the RTI components. Lack of emphasis on RTI in general education teacher preparation is a documented concern (Brownell, Sindelar, Kiely, & Danielson, 2010; Hazelkorn, Bucholz, Goodman, Duffy, & Brady, 2010; McCombes-Tolis & Spear-Swerling, 2011). The present study reveals that general education pre-service teachers understand the importance of RTI and are aware of their lack of preparation in the components of RTI. Furthermore, both special education and general education pre-service teachers in this study desired more coursework and field experiences related to RTI because they saw the need during their practicum and student teaching experiences. Clearly, teacher preparation programs are falling short. For example, concern that pre-service teachers are not being well prepared to effectively teach students within a multi-tiered support framework are

well-known (Jackson, Edmonds, Ziegler, & Marx, 2016). Jackson et al. recommend strengthening teacher preparation programs and infusing university coursework and field experiences with evidence-based practices and urge preparation programs to make the connection between coursework and fieldwork stronger. However, increasing coursework on RTI and providing practical experiences are not sufficient. Preparation programs must ensure the RTI content provided in their teacher certification programs has depth, the instructors and mentors are knowledgeable about the components of RTI, and instructors emphasize the importance of the components while covering the material.

Study participants mentioned hand-on class activities as being helpful as well as being able to work with student data. Regarding fieldwork, knowledge and expertise of mentor teachers and variety of field placements was cited across all four focus groups. Participants perceived value in observing skilled mentor teachers implementing RTI components and expressed an interest in working with students of all ability levels in a wide range of grade levels. Literature on teacher preparation provides support for the belief that preparation programs are the key to effectively training pre-service teachers to implement RTI (Denton et al., 2003). Changes to preparation programs such as instructors emphasizing the importance of RTI, providing in-class activities or assignments with the RTI components, and increasing the opportunities for pre-service teachers to implement RTI in authentic settings would enhance teacher training. Jackson et al., (2016) agree, emphasizing the need for teacher educators to afford pre-service teachers opportunities to practice skills such as implementing evidence-based practices and monitoring student progress in natural settings with mentor support. Additionally, since special education certification seekers in this study reported receiving more coursework in the RTI components and feeling more confident in their implementation ability, preparation

programs might consider increasing the special education coursework that general education certification seekers are required to take. Understandably, making changes to preparation program requirements is neither easy nor quick. Consequently, special education and general education teacher preparation faculty should collaborate on this topic to enhance curriculum. Ultimately, preparing classroom ready teachers is the responsibility of preparation programs.

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APPENDIX A

EXTENDED LITERATURE REVIEW

Introduction

A major challenge facing teacher preparation programs is preparing pre-service teachers to be effective with students of all academic and behavioral levels. In 2004, the Individuals with Disabilities Education Improvement Act (IDEIA) required educators to provide instructional support to all students experiencing difficulties and to document the effectiveness of the strategies implemented with at-risk students. At the time, the Department of Education (DOE) released a statement explaining the proposed regulations found in IDEIA and emphasized that students who are not achieving at the expected rate are to receive individualized instruction (DOE, 2004; Garcia, 2009). Thus, IDEA urged the implementation of a response to intervention (RTI) framework for identifying and intervening with students experiencing learning and behavioral difficulties.

Recent research demonstrates teacher candidates have concerns about their ability to implement RTI (Barrio & Combes, 2015; Gehrke & Cocchiarella, 2013; Spear-Swerling & Cheesman, 2012). Robichaux and Guarino (2012) suggest it is important for teacher preparation programs to understand the concerns pre-service teachers have in regard to competently implementing RTI as practitioners. However, it is not sufficient for teacher preparation programs to be aware of pre-service teachers' concerns. Preparation programs must discover in which areas gaps in experience with RTI exist. Identifying gaps in pre-service teachers' training will provide teacher preparation programs with the information necessary to effectively adjust university coursework and practicum experiences to better prepare pre-service teachers to successfully implement RTI as novice in-service practitioners.

Teacher Preparation

Teachers' roles in the classroom continue to evolve due to initiatives such as RTI. Consequently, teacher preparation programs are being tasked with training their pre-service

teachers in RTI and providing real-world opportunities for their teacher candidates to practice the components of RTI (e.g., screening, multi-tiered evidence-based intervention, progress monitoring, and data-based decision making). Given the current emphasis on key components of RTI, an understanding of how best to prepare pre-service teachers in RTI must be examined. In order for pre-service teachers to immediately enter the field and demonstrate effectiveness as novice practitioners, teachers in training must acquire not just pedagogical knowledge but also authentic experiences. Consequently, it becomes critical that teacher preparation programs afford their pre-service teachers with practical experiences and opportunities that expose them to the increasingly wide range of student needs found in today's classrooms (Conderman & Johnston-Rodriguez, 2009).

Research published over the past decade has shown the effectiveness of properly implemented RTI (Fuchs & Vaughn, 2012) and the significance of quality teacher preparation (Compton et al., 2012; Denton, 2012; Fuchs, Compton, Fuchs, & Davis, 2008; Gerber, 2005; Gersten et al., 2008; Vaughn et al., 2009). However, studies on RTI suggest pre-service and in-services teachers do not completely understand the components of the RTI framework (McCombes-Tolis & Spear-Swerling, 2011) and increased responsibilities associated with RTI may exacerbate the pressure felt by teachers. According to Conderman and Johnston-Rodriguez (2009), teachers' feelings regarding skills associated with screenings and progress monitoring are negative due to perceived feelings of being unprepared to undertake those tasks.

A variety of factors likely contribute to pre-service teachers feeling negatively in regard to their perceived ability to implement the components of RTI. Conderman and Johnston-Rodriguez (2009) and Tillery, Varjas, Meyers, and Collins (2010) suggest pre-service teachers feel an overall lack of readiness to teach students with learning and behavioral difficulties.

Barrio and Combes (2015) concluded that pre-service teachers' concerns were related to a lack of experiences related to RTI. Other research suggests concerns are primarily associated with lack of knowledge about evidence-based interventions and instructional strategies (Greenfield, Rinaldi, Proctor, & Cardarelli, 2010). For those reasons, teacher preparation programs must examine how pre-service teachers are being prepared and identify practices that increase pre-service teacher perceptions of readiness to implement RTI. Research by Greenfield and colleagues suggest there is a need for the key components of RTI to be more thoroughly address in teacher preparation programs to increase pre-service teachers' experiences with RTI.

Value of University Coursework

A growing body of literature provides support for the belief that teacher preparation programs are the key to preparing pre-service teachers to implement RTI. Denton, Vaughn, & Fletcher (2003) suggest this is largely because pre-service teachers' knowledge, skills, and dispositions are formed during their preparation program. The authors note that the philosophy, skills, and methods pre-service teachers obtain during their preparation program have a direct impact on student outcomes. Sociocultural theory (Vygotsky,1978) is predicated on the belief that student learning is considerably influenced by experiences. Clark, Byrnes, and Sudweeks (2015) point out pre-service teachers' educational experiences with the methods of teaching impact their field-based teaching. Denton et al. propose teacher preparation program curriculum may need to be revamped in order to produce pre-service teachers who understand and are ready to implement the RTI model. Furthermore, even though professional organizations have proposed standards to guide pre-service teacher training (e.g., Council for Exceptional Children, 2012). Hawkins, Kroeger, Musti-Roa, Barnett, and Ward (2008) contend having training

standards is insufficient. Thus, Hawkins et al. call for the integration of coursework and field experiences.

Field Experiences

Fieldwork allows pre-service teachers to gain practical skills through firsthand experiences that fill gaps in their knowledge while under supervision (Hallman, 2012). Field experience serve an important function in teacher preparation programs because teaching is not an innate gift but rather learned through practice (Ingersoll, Jenkins, & Lux, 2014). Additionally, the National Research Council (2010) identified field experiences as a critical component of effective teacher preparation. Clark et al. (2015) agree and suggest field experience is one of the most important experiences pre-service teachers participate in during their preparation programs.

Coffey (2010) suggests that field experiences are important pieces of teacher preparation programs because practica placements offer contexts for pre-service teachers to connect theory with practice. Eisenhardt, Besnoy, and Steele (2012) note that pre-service teachers need to see and practice the pedagogical knowledge they have acquired through university-based coursework. Although a wealth of research on teacher preparation links coursework that is interwoven with field experiences to teacher preparedness (Darling-Hammond, 2012; Wilson, Floden, & Ferrini-Mundy, 2001; Zeichner, 2010), the National Research Council (2010) points out that there is no definitive evidence as to which aspects of field experiences have the most impact on teacher effectiveness.

As pre-service teachers begin their field experiences, they hold preconceived notions about teaching and learning based on their personal learning experiences (Eisenhardt et al., 2012). Athanases & Achinstein (2003) found that pre-service teachers lack understanding of student academic skills because they have not had opportunities to work directly with students in

authentic settings. Furthermore, results from Rinn and Nelson (2009) revealed that pre-service teachers have difficulty identifying student strengths, yet are able to identify student weaknesses. The authors suggest field experiences are valuable because pre-service teachers are able to work closely with students in actual classroom settings. Working directly with students allows pre-service teachers to see the range of academic levels of the students with which they are working. Furthermore, Hawkins et al. (2008) purport in-depth field experiences must be developed to specifically allow pre-service teachers to not only practice skills but to allow reflection on instructional decisions.

Response to Intervention

RTI is a tiered educational framework that supports students who are struggling academically or behaviorally while focusing on prevention (Fuchs, Fuchs, & Compton, 2004; Sugai, Horner, & Gresham, 2002). The RTI framework is also used to monitor how well students respond to evidence-based instructional interventions (Klotz & Canter, 2007; National Center on Response to Intervention, n.d.). McLesky, Rosenberg, and Westling (2013) describe evidence-base interventions as instructional strategies that have been peer-reviewed and found to be effective through scientific research.

RTI was first proposed due to concerns related to the discrepancy model. Prior to RTI, the IQ-achievement discrepancy model was the primary means of identifying students for special education services. For students to be identified as having a specific learning disability (SLD), students had to show a significant discrepancy between their academic achievement and their cognitive ability (Kavale & Spaulding, 2008). Fuchs and Vaughn (2012) point out that effective instruction may reduce the number of students receiving referrals for special education evaluation and special education placement. Not only did RTI alter the way in which students

with SLD would be identified, it changed teacher responsibilities. Before RTI, screening, assessing, and educating students with SLD was primarily the responsibility of special education teachers (Barrio & Combes, 2015). Thus, research suggests the traditional roles and responsibilities of special education and general education teachers are changing due to RTI (Fuchs, Fuchs, & Stecker, 2010).

RTI core principles are thought to improve educational practices by encouraging educators to implement evidence-based supports and comprehensive student progress monitoring (Hoover, 2010). The tiered supports of the RTI framework calls for instructional interventions to be matched to student's individual needs and student progress be continuously monitored Collier, 2009; Garcia, 2009; Rinaldi & Samson, 2008). Furthermore, Hoover (2010) suggests the importance of all interventions and student progress being well documented.

Response to Intervention Components

The Center on Response to Intervention at the American Institutes of Research (AIR) identify screenings, along with multi-tiered evidence-based interventions, progress monitoring, and data-based decision making as the main components of RTI. The Center on Response to Intervention at the AIR continues the work of the National Center on Response to Intervention which AIR ran from 2007-2012 with a grant from the Office of Special Education Programs. Although RTI's components have been extensively researched (Fuchs & Vaughn, 2012; Hollenbeck, 2007; Stuart, Rinaldi, & Higgins-Averill, 2011), ensuring effective implementation of RTI components is difficult because of the considerable teacher expertise required (Robinson, Bursuck, & Sinclair, 2013). For example, Catts, Nielsen, Bridges, Liu, and Bontempo (2015) point out that in order for RTI to be truly successful, progress monitoring must be accurate. Additionally, teachers must implement evidence-based interventions with fidelity. As such, it is

imperative for teacher preparation programs to train pre-service teachers in each of the RTI components.

Screening

Student screening is a proactive means of identifying students who might be at risk for developing an academic or behavioral issue (Catts et al., 2015; Chafouleas, Riley-Tillman, & Sugai, 2007; Gresham, Hunter, Corwin, & Fischer, 2013). There are several types of universal screeners (Coyne & Harn, 2006). However, the most widely used method is curriculum-based measurement (CBM; Ball and Christ, 2012; Vander Meer, Lentz, & Stollar, 2005). Regardless of which type of screening is used, frequent and accurate screening is key to early identification and prevention (Gilbert, Compton, Fuchs, & Fuchs, 2012).

A study of pre-service training in RTI by Hawkins et al. (2008) found general education kindergarten students' literacy skills were screened three times a year. Screening data of students was evaluated and those students showing lack of adequate progress were provided with pull-out intervention assistance. Similarly, a case study by Ross and Lignugaris-Kraft (2015) examined the experiences of three pre-service teachers in a two-year non-traditional teacher preparation program that placed general and special education certification seeking undergraduates in high need schools to implement multi-tiered evidence-based academic and behavioral interventions. Thorough training in the RTI tiers allowed the pre-service teachers to effectively identify struggling students in need of tiered evidence-based interventions.

Multi-Tiered Instruction and Evidence-Based Intervention

The RTI framework utilizes tiers of support which intensify if students show a lack of progress (Garcia & Ortiz, 2008). Tier 1 involves the universal screening of every student. Students identified as potentially at-risk are provided evidence-based instruction and monitored.

If the interventions are deemed ineffective, the student is moved to Tier 2. Students receiving Tier 2 supports are provided with supplemental evidence-based interventions in small group settings and monitored. Those students who improve are monitored and may eventually be moved back down to Tier 1. Students not responsive to small group interventions are moved up to Tier 3. Students in the third tier receive intensive intervention (Fuchs, Fuchs, & Stecker, 2010; Hoover, 2010).

The tiered supports of RTI focus on using evidence-based intervention and individualizing instruction to address each learner's specific needs (Collier, 2009; Garcia, 2009; Rinaldi & Samson, 2008). As students move into the individualized and more intensive stages of Tier 2 and Tier 3, general education teachers are expected to implement interventions having evidence-based positive effects (Collier, 2009; Garcia, 2009; Sullivan, 2011). Part of the Tier 2 and Tier 3 process is the analysis of the individual student strengths and weaknesses to identify which evidence-based strategies should be implemented. Teachers must ensure the chosen interventions are implemented with fidelity and that there is research that the chosen intervention has shown to be effective with the targeted student (Garcia, 2009; Garcia & Ortiz, 2008).

A survey of 64 recent special education graduates by Conderman, Johnston-Rodriguez, Hartman, and Walker (2012) found that teacher candidates felt confident in their ability to provide students with individualized instruction. The Conderman research team believes pre-service teacher confidence in individualizing instruction and other areas such as behavior management was likely the result of extensive coursework and authentic clinical-related projects focused on those topics. Similarly, a mixed-method study by Al Otaiba, Lake, Greulich, Folsom, and Guidry (2012) found that pre-service teachers who receive university-based coursework in

conducting assessments and using evidence-based practices report feeling well-prepared and confident about their teaching during field experiences.

Progress Monitoring

The National Center on Student Progress Monitoring at the AIR defines progress monitoring as a scientifically-based procedure to measure student performance and evaluate instruction effectiveness. Therefore, it is critical that teachers measure student performance frequently to determine whether their instruction is effective. CBM are the most frequently used form of progress monitoring in math, reading, and writing (Deno, 2003). However, Shapiro (2010) suggests that CBM may be inappropriate for monitoring the progress of isolated skills. Ball and Christ (2012) concur having found that CBM-Reading was not reliable for monitoring change over brief intervals or sensitive to specific skill development. Thus, the authors recommend using assessment systems such as Dynamic Indicators of Basic Early Literacy Skills (DIBELS), AIMSWeb, and System to Enhance Educational Performance (STEEP). Since there are many assessment systems available, pre-service teachers need to be knowledgeable of the systems available and provided opportunities to practice using a variety of progress monitoring tools. Many assessment systems are relatively inexpensive, easy to use, and can be used for screening as well as for progress monitoring (Ball & Christ, 2012). Therefore, in addition to practicing with assessment systems, it is important that pre-service teachers are trained in how to assess the technical adequacies and inadequacies of progress monitoring measures.

Hanline (2010) conducted a qualitative study with 15 early childhood education majors as they completed their field experiences. The findings from Hanline's study suggest that although pre-service teachers struggled with the time commitment required to collect assessment data, they recognized data collection as necessary for progress monitoring. Eisenhardt, Besnoy and

Steele (2012) had similar findings. The pre-service elementary teachers in their study found observing and recording student progress provided valuable insight which helped the teacher candidates to plan instruction. Furthermore, one participant noted that recording student learning progress is an essential task for teachers. These findings suggest that field experiences that allow pre-service teachers to practice components of RTI such as progress monitoring help them understand the value and applicability of practices associated with RTI.

Data-Based Decision Making

Data should be collected frequently and meticulously (Bayat, Mindes, & Covitt, 2010) because data-based decision making plays a major role in RTI implementation and has been shown to increase student achievement (Firestone & Gonzalez, 2007). Shapiro et al. (2011) suggest data-based decision making is used to match student need to the appropriate tier of intervention, decide when to modify instruction, identify when a student should change tiers, show whether students are responding or not responding to evidence-based interventions, and for deciding if a student should be referred for special education evaluation. Further, the DOE (n.d.) states that data from assessments should drive instruction. Thus, pre-service teachers must be taught how to use data to adapt instruction, evaluate student progress, identify successes, and improve weaknesses. To do so, teacher preparation programs must ensure that training is provided in all aspects of data-based decision making (e.g. data collection, analysis, evaluation, data interpretation).

Harris (2011) emphasizes the importance of teachers having data analysis and interpretation skills so that data are meaningful. Wilkins and Shin (2010) followed 64 pre-service elementary teachers as they used peer feedback during a year of fieldwork to reflect on data-driven practices. Findings suggest pre-service teachers benefited from receiving feedback and the

feedback improved their professional practice, student learning, and classroom instruction. The Eisenhardt research team (2012) followed 58 pre-service teachers as they collected data and conduct assessments on two elementary students identified by their classroom mentor teachers as "struggling." Eisenhardt et al. found that pre-service teachers reported that assessing and documenting their assigned students helped them make more effective instructional decisions.

APPENDIX B

DETAILED METHODOLOGY

Detailed Methodology

The current study utilized a non-experimental concurrent mixed-methods research design to gain understanding of pre-service teachers' perceptions and experiences with the four components of RTI during university coursework and field experiences. Quantitative and qualitative data are of equal importance and were collected via a researcher developed student self-report questionnaire and focus groups representing four separate groups of certification seekers enrolled in the final semester of an undergraduate initial teacher preparation program in a large southwestern university in the United States. The design of this study was approved by the university Internal Review Board (IRB) prior to data collection. The questionnaire was created based on the meta-framework, *Instrument Development and Construction Validation* (IDCV), developed by Onwuegbuzie, Bustamante, and Nelson (2010). We began the IDVC process by conceptualizing our topic through an extensive review of the literature and consulting with local experts which allowed the researchers to identify the constructs of interest. Drafting the initial instrument was a team effort and iterative with question adjustments made based on feedback from local experts including six teacher educators and six in-service teachers who helped evaluate and ensure the instrument effectively captures the topic under investigation. After initial questionnaire creation, a psychometrician evaluated the question construction for common errors and the questionnaire was pilot tested with three pre-service teachers. Then, cognitive interviews were conducted with the three volunteers to obtain feedback on the questionnaire and to assess question clarity and relevance.

Following the pilot test, the questionnaire was once again revised to improve clarity and ensure the instrument represented all facets of the constructs under investigation. Next, a field test was conducted using the revised instrument with a homogeneous sample, $n = 33$. Upon completion of data collection, the quantitative data was cleaned and analyzed to assess content

validity, criterion validity, and construct validity of the Likert-type questions. Underlying components were identified using principal components analysis (PCA) to reveal which factors were being measured by which questions. Questions loading on the same factor were aggregated and compared during final analysis. To check for internal consistency of the questions, the correlation between questions loading on the same factor were tested using Cronbach's Alpha (CA). As noted in the literature, a CA of 0.80 or higher demonstrates adequate internal consistency. Analysis determined the reliability of the responses on this survey to be in the excellent range for the with a CA of 0.91.

Quantitative Data Analysis Overview

Henson, Hull, and Williams (2010) stress quantitative methods are necessary in educational research and are a key part of the mixed methodology paradigm. Therefore, descriptive statistics including frequencies, means, and standard deviations were used to analyze Likert-type scale questionnaire items. In addition, a one-way analysis of variance (ANOVA) was conducted for the purpose of identifying possible differences across area of certification sought (i.e., EC-6, 4-8, 7-12, and special education). The participant demographic data were collected from the questionnaire and given an appropriate value before dichotomously coding gender and certification sought. The questionnaire was created in Qualtrics and the quantitative data will be entered into SPSS for analysis.

A mixed-methods research design was used to comprehensively answer the research questions under investigation. Data were analyzed using descriptive statistics, analysis of variance (ANOVA), and thematic analysis. Cronbach's alpha was used to evaluate the reliability of the responses on the questionnaire. A minimum range of .70 is desirable for measures in development that are used for research purposes (Henson, 2001). The questionnaire used in the

present study is in the excellent range at .95 for all 20 items. Factor analysis was performed to evaluate measurement validity. A one factor solution was best supported based on a one factor eigenvalue of 50.91 and a clear break in the scree plot. The Eigenvalues are shown in Table B.1 and the scree plot in Figure B.1.

Table B.1

Eigenvalues

	Initial Eigenvalues			Extraction Sums of Squared Loadings		
Factor	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	10.18	50.91	50.91	9.81	49.04	49.04
2	1.53	7.63	58.54	1.09	5.44	54.48
3	1.46	7.30	65.84	1.03	5.13	59.61
4	.83	4.17	70.00			
5	.74	3.69	73.69			
6	.69	3.45	77.13			
7	.61	3.05	80.19			
8	.55	2.75	82.94			
9	.48	2.39	85.33			
10	.43	2.13	87.45			
11	.38	1.88	89.34			
12	.34	1.72	91.05			
13	.31	1.55	92.60			
14	.29	1.47	94.07			
15	.28	1.37	95.45			
16	.24	1.21	96.66			
17	.20	.99	97.65			
18	.19	.95	98.60			
19	.16	.82	99.41			
20	.12	.59	100.00			

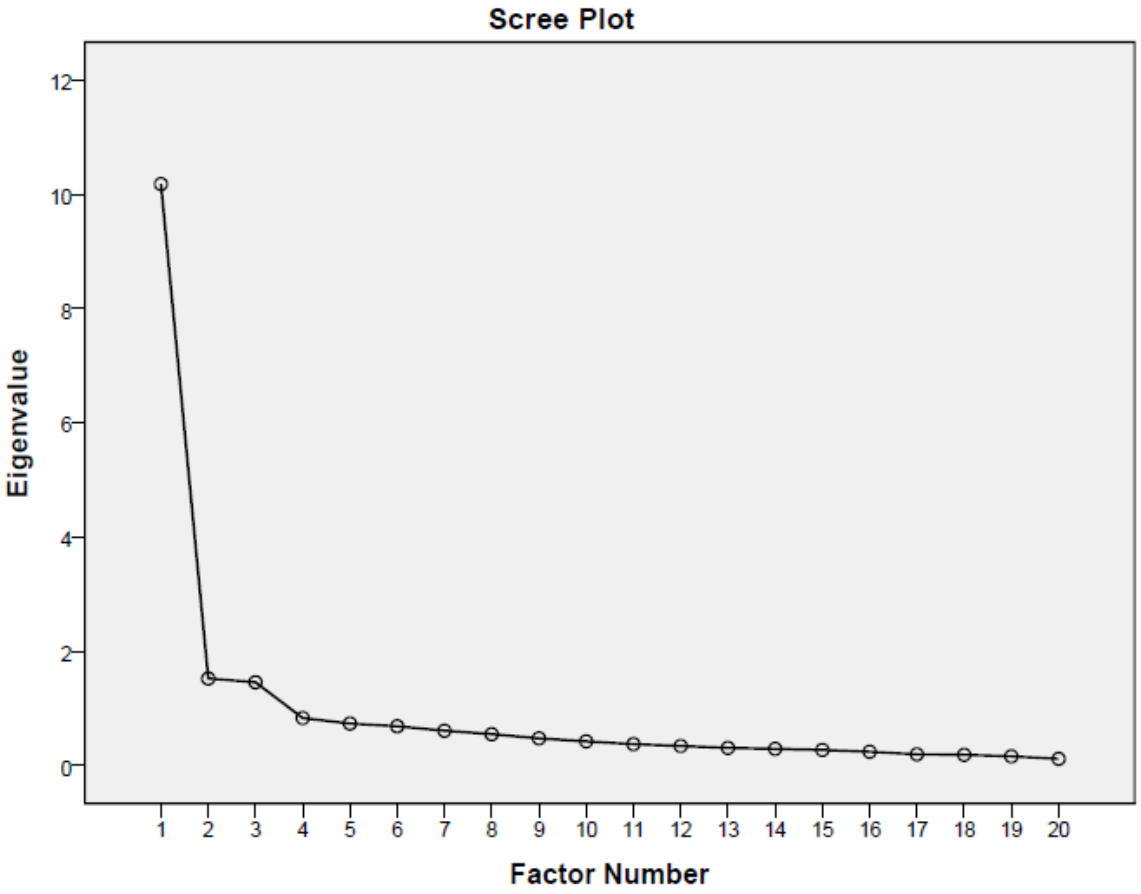

Figure B.1. Scree plot

Descriptive statistics including means, standard deviations, skewness, and kurtosis were used to analyze Likert-type scale questionnaire items. The participant demographic data were collected from the questionnaire and given an appropriate value before dichotomously coding gender and certification sought (EC-6, 4-8, 7-12, or special education). Descriptive statistics assisted with detecting sample characteristics that may have influenced study findings (Thompson, 2009).

An analysis of variance (ANOVA) was run to determine if significant group differences existed between the mean scores of questionnaire participants on the full scale. ANOVA is a statistical technique used to compare the means of two or more groups. Using a one-way ANOVA helped control Type I error for both research questions under quantitative investigation (Tabachnick & Fidell, 2013). ANOVA allowed the researcher to detect when groups differed based on type of certification sought. Before running the one-way ANOVA, the data being analyzed was checked to ensure no ANOVA assumptions were violated. Specifically, each group sample was drawn from a normally distributed population, all populations had a common variance, all samples were drawn independently of each other, and within each sample, the observations are sampled randomly and independently of each other. Checking to verify ANOVA assumptions were not violated was necessary to ensure obtained results would be valid.

Descriptive Data Analysis

The first step in analyzing the quantitative data will be to describe the sample and the subgroups within the sample. Descriptive data analysis utilizes frequencies of responses and correlation analysis to understand participants' pre-service perceptions and experiences during coursework and field experiences with the four components of RTI. Additionally, the descriptive

statistics will be used to assist with detecting sample characteristics that may influence study conclusions (Thompson, 2009). Full scale descriptive statistics will be presented in Table 1

Analysis of Variance

An analysis of variance (ANOVA) statistical test was run to determine whether there were significant group differences between the mean scores of questionnaire participants on the full scale. ANOVA is a statistical technique used to compare the means of two or more groups. Using ANOVA helps control Type I error (Tabachnick & Fidell, 2013). Additionally, ANOVA allowed the researcher to detect when groups differed based on type of certification sought. Before running the one-way ANOVA, the data being analyzed was checked to ensure no ANOVA assumptions were violated. Specifically, each group sample was drawn from a normally distributed population, all populations had a common variance, all samples were drawn independently of each other, and within each sample, the observations are sampled randomly and independently of each other. Checking to verify ANOVA assumptions were not violated was necessary to ensure results obtained will be valid.

Questionnaire Validity

The questionnaire was created based on the meta-framework, *Instrument Development and Construction Validation* (IDCV), developed by Onwuegbuzie, Bustamante, and Nelson (2010). The IDVC meta-framework has ten interactive phases: 1) conceptualization of the construct of interest; 2) identification and description of behaviors underlying the construct; 3) development of the initial instrument; 4) conducting a pilot test of the initial instrument; 5) designing and field testing the revised instrument; 6) using quantitative analysis to validate the instrument; 7) using qualitative analysis to validate the instrument; 8) using qualitative dominant

mixed analysis to validate the instrument; 9) using quantitative dominant mixed analysis to validate the instrument; and 10) comprehensively evaluating the instrument and the process.

We began the IDVC process by conceptualizing our topic through an extensive review of the literature and consulting with local experts which allowed the researchers to identify the constructs of interest. Next, the initial instrument was developed. The item writing process was a team effort and iterative with question adjustments being made based on feedback from local experts: six teacher educators and six in-service teachers to evaluate and ensure the instrument effectively captures the topic under investigation. After initial questionnaire creation, a psychometrician evaluated the question construction for common errors and the questionnaire was pilot tested to assess question clarity and relevance.

Following the pilot test, the questionnaire was once again revised to improve clarity and ensure the measure represented all facets of the constructs under investigation. Next, a field test was conducted using the revised instrument with a homogeneous sample, $n = 33$. A homogeneous sample was sought to minimize the range of variation between the field test participants and the study participants (Palinkas et al., 2015). Upon completion of data collection, the quantitative data will be cleaned and statistics run to assess content validity, criterion validity, and construct validity of the Likert-style questions. Underlying components will be identified using principal components analysis (PCA) which will reveal which factors are being measured by each question. Questions loading on the same factor will be aggregated and compared during final analysis. To check for internal consistency of questions, the correlation between questions loading on the same factor will be tested using Cronbach's Alpha (CA). A CA of 0.80 or higher will demonstrate internal consistency.

The qualitative validity of the questionnaire will be assessed using the seminal six-step Thematic Analysis (TA) approach (see Braun & Clarke, 2006). TA is a powerful data analysis method because it seeks to identify, describe, and analyze patterns in qualitative data (Clarke & Braun, 2013). The first phase requires the researcher to become very familiar with the data collected. This entails reading the data several times. Next, the researcher generates initial codes and searches for themes. The researcher will look for both explicit and implicit ideas contained in the data and review the themes to ensure themes fit and are complete. Once the themes have been sufficiently reviewed, the researcher will define and name the themes using examples from the data. The penultimate phase of IDCV involves conducting a mixed analysis to validate the instrument whereby the qualitative themes are correlated to the factors extracted during quantitative analysis in order to generate meta-themes. Lastly, the questionnaire will undergo a final round of comprehensive product and process evaluation.

Qualitative Data Analysis Overview

The analysis of the qualitative data collected from the open response questions were categorized and coded based on themes that emerge from each of the groups of respondents (elementary, secondary, general education certification, special education certification). Data was analyzed using the six-step Thematic Analysis (TA) approach to qualitative data analysis developed by Braun and Clarke (2006). TA was used to analyze the data collected from the focus groups. The focus group recording will be transcribed verbatim to ensure all responses were included for analysis.

Thematic Analysis

The ultimate goal of qualitative research is to provide understanding about a phenomenon from the perspective of those who experience the phenomenon (Vaismoradi, Turunen, &

Bondas, 2013) within a particular context. Since the goal is to bring about understanding, it is imperative that researchers utilize an analysis framework that will ensure quality (Morrow, 2005). TA is a powerful data analysis method because it seeks to identify, describe, and analyze patterns in qualitative data (Clarke & Braun, 2013). The patterns found in the data are known as themes which become apparent through a process of data reduction during coding (Grbich, 2013). Sandelowski and Leeman (2012) describe a theme as a clear integration of distinct pieces of data that create the final findings. As a method, TA is flexible and has the potential to provide a rich detailed account of data (Braun & Clarke, 2006). Therefore, TA was selected as the qualitative data analysis framework for both focus groups and the qualitative data obtained from the questionnaire.

The TA framework I will utilize for study is based on the six stages outlined by the seminal work of Braun and Clarke (2006). As stated by Braun and Clarke, the first phase is to become very familiar with the data collected. This entails completing any necessary transcription and reading the data several times. Next, the researcher generates initial codes. Thus, TA requires significant interpretation from the researcher. The third step involves the researcher searching for themes. Themes will be shown in Table 5. It is important for the researcher to look for both explicit and implicit ideas contained in the data. Then, the researcher must review the themes to ensure they fit and are complete. Once the themes have been sufficiently reviewed, the researcher needs to define and name the themes using examples from the data. The final phase of TA is the actual writing of the final research report (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006).

Qualitative Validity

To increase the credibility and validity of the results in qualitative studies, researchers should always be concerned about demonstrating their trustworthiness. In many ways, validity deals with the outcomes of a study. As such, accuracy of the data is imperative. The answers participants submitted to the open-ended questions were extracted word for word since participant extracts were used as 'evidence' in the researcher's analytic narrative. Additionally, researcher interpretation is a critical element of a study's findings. Thus, in order for readers to trust the findings of this study, methods and procedures must be transparent. A criticism of using Braun and Clarke's (2006) framework as a method of data analysis is that the approach lacks clear guidelines on how to describe the analysis process (Attride-Stirling, 2001). To address this concern, the analysis process was clearly described and thoroughly explained with the goal of being clear and transparent so this study can be easily replicated in the future.

Meta-Inference

The results of the quantitative and qualitative data will be combined to provide holistic answers to the research questions under investigation. Inferences from results of the quantitative and qualitative studies will be integrated to form meta-inferences (Teddlie & Tashakkori, 2009; Venkatesh, Brown, & Bala, 2013). Meta-inferences will be reached by triangulating the quantitative results and qualitative findings.

There are several types of triangulation including data, methods, and researcher (Hussein, 2009). Data triangulation is one way to establish credibility. Triangulation can occur during the stages of gathering and coding data as well as during the inference process. Grbich (2013) describes data triangulation as using two or more methods of data analysis to check findings. Other methods researchers can employ to enhance the credibility of their studies include

providing thick rich description, being reflexive, and providing negative evidence (Cope, 2014; Guba & Lincoln, 1994; Lincoln & Guba, 1985; Morrow, 2005). Triangulation of methods means using several methods to gather data. Then, during the inference process, researchers must analyze the evidence and code the data collected during observations and interviews.

To increase the credibility and validity of the results in this study, the researcher will strive to demonstrating trustworthiness. To do so, the researcher will employ researcher triangulation which entails using multiple researchers in a study to gather and interpret data. Denzin (1978) called this investigator triangulation. Two assistant researchers will be used to code and analyze both the quantitative and the qualitative data. First, the three researchers will analyze all data independently. Next, the researchers will meet to discuss discrepancies and reach consensus (Hellsten, Prytula, Ebanks, & Lai, 2009). McCormick and Brunette (2004) recommend meeting frequently to discuss new insights and discrepancies. These meetings allowed the researchers to refine their themes and reflect on any new understandings that may arise during consensus building. In the case of this study, the rationale for using assistant researchers is to check the principle investigator's coding and analysis for accuracy. Furthermore, inter-rater reliability scores will be calculated to ensure coding fidelity and will be disclosed in the study write-up.

APPENDIX C:

COMPLETE/UNABRIDGED RESULTS

Results

The present study produced both quantitative results and qualitative findings related to the perceptions and experiences of 169 pre-service teachers with the four main components of RTI during their university-based coursework and field experiences. The analysis revealed differences between general education certification seekers at each certification level compared with special education certification seekers. Only minimal differences were found between the general education certification seeking groups. Specifically, slight differences were identified between EC-6 compared with 7-12 and between 4-8 compared with 7-12.

Quantitative Results

Prior to analysis data was cleaned and assumption checks were performed. The questionnaire responses in this study were screened and evaluated for missing data according to the procedures outlined by Tabachnick and Fidell (2013). Missing data in this study were minimal, at only 3.4% missing. Therefore, incomplete responses were deleted, a technique called listwise deletion. Listwise deletion excludes cases with missing data on any variable used in an analysis (Rubin, Witkiewitz, St. Andre, & Reilly, 2007). All ANOVA assumptions were met. ach group sample was drawn from a normally distributed population which was checked with skewness and kurtosis of the scale. All populations had a common variance. Homogeneity was supported using Levene's test (p = .64). See Table 1 for Levene's test of equality of error variances. All samples were drawn independently of each other, and within each sample, the observations are sampled randomly and independently of each other. Post hoc power analysis was conducted which resulted in a power of 0.41.

Table C.1

Levene's Test of Equality of Error Variances

F	df1	df2	Sig.
.57	3	165	.64

Descriptive statistics provide a means of evaluating the central tendency as well as showing how far the data was spread out. The sample size of the current study was $n = 169$. Within the sample, 55.62% were EC-6 general education certification seekers, 16.6% were 4-8 general education certification seekers, 21.9% were 7-12 general education certification seekers, and 6% were special education certification seekers. The 20 questionnaire items were coded on a 1 to 4 scale meaning the possible range of responses could have been as low as 20 and as high as 80. The mean was 45.4, with a range of 22-78. The standard deviation was SD = 12.01. The skewness of the full scale was .45 with a standard error of .19. Table C.2 provides descriptive statistics for the full scale.

Table C.2

Full Scale Descriptive Statistics

	N	Minimum	Maximum	Mean	SD	Skewness		Kurtosis	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Full Scale	169	22.00	78.00	45.39	12.01	.45	.19	-.10	.37

Comparison Between Groups

To address the research questions: "Do perceptions of preparedness to implement the components of response to intervention differ between general education and special education certification seekers?" and "Do perceptions of preparedness to implement the components of

response to intervention differ based on level of general education certification?", a one-way ANOVA was used to analyze the differences between the means of the four IVs. The analysis results showed general education certification levels, EC-6 and 7-12 with a $p < .001$ and 4-8 with a $p < .002$ compared to special education certification seekers. These results are statistically significant and indicate that differences in perceptions of preparedness to address the components of RTI do exist between each general education group compared to the special education group. Cohen's *d* provides effect sizes for the between group differences. The effect sizes for special education compared to EC-6 is $d = -1.41$, special education compared to 4-8 is $d = -1.20$, and special education compared to 7-12 is $d = -1.74$. These effect sizes show that all general education groups were more than one standard deviation lower than the special education group.

Eta-squared (η^2) is a measure of effect size for use in ANOVA. The one-way ANOVA found 16% of the variance in the group comparisons, area of certification sought, is explained by the model, $F_3 = 10.10$, $p < .001$, $\eta^2 = 16$. Thus, area of certification sought explains 16% of the variance respondent answers on the scale. The ANOVA table is shown in Table 3. According to Pierce, Block, and Aguinis (2004), interpretation of η^2 using Cohen's effect rule criteria of .02 ~ small, .13 ~ medium, and .26 ~ large, places the special education certification seekers group compared with each of the general education certification seeker groups (i.e., EC-6, 4-8, 7-12) effect size in the medium range.

Table C.3

ANOVA Table

Source	*df*	Mean Squared	*F*	*P*	η^2
Model	3	1252.97	10.10	<.001	.16
Error	165	124.07			
Total	168				

Results indicate there is not a significant difference among any of the general education groups (i.e., EC-6, 4-8, and 7-12). No comparison of the general education groups had a $p < .05$. Therefore, these results are not statistically significant and indicate that differences in perceptions of preparedness to implement the components of RTI do not exist among the general education certification groups. Non-statistically significant results may be due to sample size. However, the effect sizes for EC-6 compared to 7-12 and 4-8 compared with 7-12 are $d = 0.44$ and $d = 0.57$, indicating that there may be differences that where not detected. Multiple comparisons of the dependent variable (IV), area of certification sought is presented in Table C.4.

Table C.4

Multiple Comparisons of the Dependent Variable

Area of Certification Sought	Area of Certification Sought	Mean Difference	*SE*	95% Confidence Interval		*p*-value	Cohen's *d*
				Lower Bound	Upper Bound		
EC-6	4-8	-1.78	2.40	-8.01	4.44	.88	-0.16
	7-12	4.88	2.16	-.73	10.49	.11	0.44
	SPED	-16.72	3.70	-26.34	-7.10	<.001	-1.41
4-8	7-12	6.67	2.79	-.57	13.91	.08	0.57
	SPED	-14.94	4.10	-25.59	-4.29	.002	-1.20
7-12	SPED	-21.60	3.97	-31.91	-11.30	<.001	-1.74

To more closely examine the perceptions of pre-service teachers regarding their confidence in implementing the components of RTI, the questionnaire asked students to rate how confident they feel with RTI. All responses were coded from 1 to 4 with 1 = *"not at all confident"*, 2 = *"somewhat confident"*, 3 = *"confident"*, and 4 = *"extremely confident*". Table C.5 presents the mean of each certification type in response to questions concerning perceived ability to implement RTI and RTI components. The results show special education seekers had higher mean perceived confidence levels than general education certification seekers and 7-12 certification seekers had the lowest perceived confidence in their ability to implement RTI.

Table C.5

Means of Responses to Confidence Items by Certification Cought

Questionnaire Item	EC-6	4-8	7-12	SPED
Confidence using screening data to make educational decisions for students	2.13	2.28	2.0	3.0
Confidence using progress monitoring tools to monitor student progress	2.25	2.38	2.11	2.9
Confidence using data to make educational decisions for students	2.39	2.66	2.05	3.0
Confidence you can implement RTI in your own classroom next year	2.19	2.34	1.97	3.00

Note. Certification Sought: EC-6 general education (n = 94), 4-8 general education (n = 28), 7-12 (n = 37), special education (n = 10)

In order to gain understanding of pre-service teachers' preparation in the components of RTI, the questionnaire asked students to select how much university-based coursework they received in RTI. Table C.6 presents the mean perceived coursework received with response choices of *"none"*, "*little"*, "*some"*, or *"a lot"* of training in RTI and the RTI components. University-based coursework was described to include activities such as readings, lectures, and assignments. "*None"* was operationalized to represent zero coursework, *"little*" indicated less than three class sessions or assignments, "some" was operationalized to represent 3-6, and *"a lot"* was operationalized to signify 7 or more sessions that included readings, lectures, or assignments on the topic. All responses were coded on a 1-4 scale from least to most. Once again, the results indicate special education pre-service teachers perceived receiving more training than all groups of general education pre-service teachers and 7-12 certification teachers reported receiving the least amount of university-based coursework.

Table C.6

Mean Amount of RTI Training in Coursework by Certification Sought

Questionnaire Item	EC-6	4-8	7-12	SPED
RTI training received across all university coursework	2.38	2.41	2.0	3.5
Instruction on screenings have you received	1.82	1.83	1.58	2.6
Instruction on evidence-based interventions	2.2	2.07	1.79	2.9
Instruction on progress monitoring	2.32	2.24	2.11	3.2
Instruction on data-based decision making	2.15	2.14	1.84	3.1

Note. Certification Sought: EC-6 general education (n = 94), 4-8 general education (n = 28), 7-12 (n = 37), special education (n = 10)

To obtain data on pre-service teachers' fieldwork experiences with the components of RTI, the questionnaire asked students about their field experiences. Table C.7 presents the mean perceived amount of field experiences with response choices of "*none*", *"little"*, "*some*", or *"a lot"*. Field experiences were described to include all field-based activities such as practicum placements, student teaching, internships, or staff development sessions. As with the questionnaire items about coursework, "*None"* was operationalized to represent zero fieldwork, *"little"* indicated less than three field opportunities, *"some*" was operationalized to represent 3-6, and "*a lot"* was operationalized to signify 7 or more field experiences with RTI. All responses were coded on a 1-4 scale from least to most. Once again, the results indicate special education pre-service teachers perceived having more field experiences compared to all of the general education groups. Yet again, among the general education certification seekers, 7-12 pre-service teachers reported having the least number of field experiences with the components of RTI.

Table C.7

Mean Amount of RTI Field Experiences by Certification Sought

Questionnaire Item	EC-6	4-8	7-12	SPED
RTI across all field-based experiences	2.28	2.24	1.89	3.6
Field experiences with screenings	1.73	1.9	1.68	2.7
Field experiences with implementing evidence-based interventions	2.14	2.62	2.08	3.3
Field experiences with progress monitoring	2.34	2.45	2.21	3.1
Field experiences with data-based decision making	2.26	2.62	2.08	3.1

Note. Certification Sought: EC-6 general education (n = 94), 4-8 general education (n = 28), 7-12 (n = 37), special education (n = 10)

Qualitative Findings

The lead researcher in collaboration with two assistant researchers analyzed verbatim transcripts using thematic analysis (TA) to obtain themes (Braun & Clarke, 2006). TA was used to identify patterns and meaning in the qualitative data set. Three open response questions asked respondents to provide additional information on their RTI preparation. Specifically, what did they wish had been included or more deeply covered in their coursework and field experiences as well as details about the coursework and field experiences they believe strengthened their ability to implement the components of RTI. Not all participants provided responses to the open response questions (N = 110).

In addition to the open response items, four focus groups were conducted. All four focus groups had four participants with the exception of the 7-12 group which had five participants. The data sets from the questionnaire and the focus groups were analyzed according to the Braun and Clarke (2006) framework by three researchers. The responses were organized by group and

the researchers familiarized themselves with the data. The researcher and two assistant researchers generated initial codes before searching for themes. Themes were individually identified by each researcher before the researchers met to jointly share, compare, discuss, and reach consensus on themes. The researchers reviewed the themes to ensure themes fit and were complete. Once the themes had been sufficiently reviewed, the researchers defined and named the themes using examples from the data.

Open Response Questions

All participants completing the questionnaire were provided an opportunity to respond to three open response question: 1) Is there anything related to RTI that you wish had been included or more deeply covered in your university coursework?, 2) Is there anything related to RTI that you wish had been included or more deeply covered in your field experiences?, and 3) Please provide details about the coursework and field experiences you believe strengthened your ability to implement the components of RTI. Three themes emerged from the responses.

Theme 1: Desire for a Deeper Understanding of RTI

Regarding university-based coursework, one student seeking special education certification stated, "I was very well trained in my coursework." However, most would have liked more classroom experiences doing RTI activities. An EC-6 certification seeker stated, "We simply went over the steps" and one 4-8 respondent wrote, "More of everything." This sentiment was repeatedly mentioned with similar responses. For example, an EC-6 respondent stated, "I felt like it was something that was just mentioned." The pre-service teachers seeking 7-12 certification reported receiving no or very little coursework on RTI. For instance, "RTI was never fully explained, much less given time in class to learn how to implement it." and "I don't recall ever discussing it in my course as a student." Participants seem to have an understanding

of the importance of RTI as evidenced by their desire to have more coursework on the topic, "I think we need a whole RTI class," wrote one 4-8 certification seeker.

Theme 2: Appreciation of Implementation Opportunities

In regard to field experience comments, responses centered around the benefits of authentic experiences. Special education certification seekers reported more field experiences than general education certification seekers. A special education certification seeker wrote, "I had a lot of field experience with RTI." In contrast, a 7-12 respondent wrote, "I wish I had more experience implementing RTI in my classroom," a feeling shared by respondents across all levels.

Theme 3: Value of Mentorship

Mentorship was noted in several responses. For example, an EC-6 certification seeker stated, "I wish my mentor teacher had walked through all of her instructional decisions based on her RTI data." Another EC-6 student would have appreciated opportunities to observe more teachers during field experiences. Finally, one 7-12 pre-service teacher mentioned, "I would have liked to attend trainings and meetings." In regard to individual components of RTI, screening, progress monitoring, and data-based decision making were all mentioned, with students expressing a general desire to have received more field experiences observing and implementing those components.

Themes from the open response questions did not vary based on type of certification sought. A general desire for more and deeper coverage of RTI and the individual components of RTI in university coursework and during field experiences was evident across all certification groups. The desire for more training in RTI is in keeping with Barrio and Combes (2015) who noted the general education pre-services teachers in their study expressed concerns about the

limited amount of RTI training in their teacher preparation program. Additional findings from Barrio and Combes revealed a perceived lack of field experiences affording pre-service teachers opportunities to observe in-service teachers "go through the RTI process." The researchers concluded pre-service teachers needed further preparation in the RTI model and its components.

Focus Groups

Four focus groups were conducted to answer research questions 3) Which aspects of teacher preparation coursework contribute to pre-service teachers' perceived ability to implement the components of response to intervention? and 4) Which aspects of field experiences contribute to pre-service teachers' perceived ability to implement components of response to intervention? Additionally, the focus groups provided a deeper understanding of the quantitative results of this study that addressed research questions 1) Do perceptions of preparedness to implement the components of response to intervention differ between general education and special education certification seekers? and 2) Do perceptions of preparedness to implement the components of response to intervention differ based on level of general education certification?

During each focus group, participants were asked about their coursework in each RTI component and then asked about their field experiences with each RTI component. In searching for answers to the research question, three relevant themes emerged. The first theme centered around awareness and understanding of RTI and RTI components. Theme two focused on perceived value of hands-on coursework activities and authentic field experiences. The final theme from the focus groups dealt with the knowledge and expertise of teacher educators and mentor teachers in solidifying perceptions of confidence or ability.

Theme 1: Awareness and Understanding of RTI

The theme awareness and understanding of RTI describes comments made about a lack of understanding of screening, multi-tiered intervention, progress monitoring, data-based decision making, or RTI in general. At the conclusion of the 7-12 focus group, one participant stated terminology was an issue, "I definitely did not know what it was. Now that we have talked about it out loud I definitely know that we have been doing it and that it's something I do in the classroom." Another 7-12 participant agreed saying, "I sat in on an RTI meeting and I remember I was like, 'What is an RTI?'." Similar situations occurred in the EC-6 and 4-8 focus groups, with participants repeatedly asking for explanations and examples of the RTI components. It is worth noting, that the participants in the special education focus group did not request definitions or clarification related to the components of RTI.

Theme 2: Quality of Coursework Activities and Field Experiences

Participants in all four focus groups expressed either an appreciation for having received coursework and field experiences with the components of RTI or a desire to have had more experiences. In regard to coursework in screening, tiered interventions, and progress monitoring, the EC-6 focus group described learning about it on a superficial level, the 4-8 group mentioned specific coursework on those components, the 7-12 group discussed learning about formative assessments, and the special education focus group members provided detailed description of assignments and activities with those components. One participant in the special education focus group stated, "We've only seen it in the special education courses, so I think it would be nice to see it in general ed. because I know it is important there too." Another member of that focus group agreed recommending that RTI should be incorporated more in general education coursework.

The responses about coursework related to data-based decision making were mixed. Again, the special education students recalled assignments and activities related to that component. Somewhat surprisingly, the EC-6 and 4-8 focus group members all claim to have received no hands-on activities associated with data-based decision making. An EC-6 participant noted,

> They never - we never saw any data. No one ever brought out any example data or data at all so we never saw any data until we got to student teaching. They would talk about, you will do this, but we never actually did any of it or saw any of it, just, hey you're gonna do this at some point.

Unexpectedly, the participants in the 7-12 group recalled analyzing student exam scores which made them feel prepared for their fieldwork. For example, a participant stated, "I was really encouraged when I came here and got to talk to some of the teachers here and realized that they did the same thing, only like for state mandated test and other things like that."

Field experiences with the components of RTI were noted across all groups and participants. Generally, all focus groups members had field experiences with the components of RTI. However, field placements and access to students of varying ability levels were sometimes limited. Participants expressed a desire to work with a wide range of ability levels and grade levels. Focus group members with the most diverse field experiences emphasized the benefits of the experiences and those participants with limited experiences felt broader exposure to a variety of students and settings would have increased their confidence with RTI. These qualitative findings related to field experiences align with the literature on teacher preparation which indicates field experiences have the highest impact on pre-service teachers' professional preparation (Conderman, Johnston-Rodriguez, Hartman, & Walker, 2012).

Theme 3: Role of Teacher Educators and Mentor Teachers in Solidifying Perceptions of Confidence or Ability

Perceived quality of teacher educators and mentor teachers was discussed in all four focus groups. The focus group participants noted benefits from seeing high quality instruction in authentic settings. For instance, one 7-12 participant shared that observing in-practice teachers implement RTI was beneficial, "I really enjoyed seeing teachers and how they do things." A participant in the EC-6 group mentioned a professor bringing screeners to class and allowing students to practice giving the assessments and interpreting the results, stating, "It was really interesting to see how the different tests worked." During the same focus group, while discussing progress monitoring, another participant brought up lack of professor support and low professor standards and expectations, "He didn't really teach us anything. We got very limited data to work with, so it was really ineffective for teaching us what to do with the data."

The focus group participants spoke of professors and mentor teachers as being resources for tiered instruction and evidence-based interventions. One special education focus group participant noted pre-service teachers felt comfortable asking for assistance from professors, "We could go and say, 'Hey, my students are struggling with this, this is what I saw while doing CBMs. Can you help me pick an intervention?'." A 7-12 focus group participant had a similar experience with a mentor teacher regarding evidence-based interventions and stated,

> I think what has been really helpful is my mentor teacher. He has given me different tools so that we can help those students catch up to the rest of the students. He wanted to be there for me and supported me with whatever I needed, but also backed off and kind of let me run the classroom. He gave me the opportunity to put those things that I have learned into practice.

Finally, during a discussion of recommendations to improve field experiences with the RTI components, a 4-8 focus group participant discussed the importance of mentor teachers. The participant stated, “I definitely think that a good mentor teacher makes a huge difference.” Another participant agreed, “Participant 4’s mentor teacher is phenomenal.” The participant went on to state that opportunities to observe the ‘phenomenal’ mentor teacher were provided, however, “It’s not the same as getting involved and having that mentor teacher force you to do things you’re not comfortable with to grow.” These comments demonstrate pre-service teacher awareness of the difference a quality mentor can make during field experiences.

The pre-service teachers who participated in the focus group mirrored the feelings of the respondents who completed the open response items on the questionnaire. Participants in both groups seemed to have an awareness of the value both coursework and fieldwork have in preparing them in RTI and its components. This is evidenced by an EC-6 certification seeking pre-service teacher who stated, “The coursework taught me about RTI, but the field experiences taught me all of RTI and how to implement.” Figure 1 is a conceptual map of the qualitative findings from this study showing the aspects of coursework and field experiences found to positively impact pre-service teacher understanding of the components of RTI and in turn increase implementation confidence.

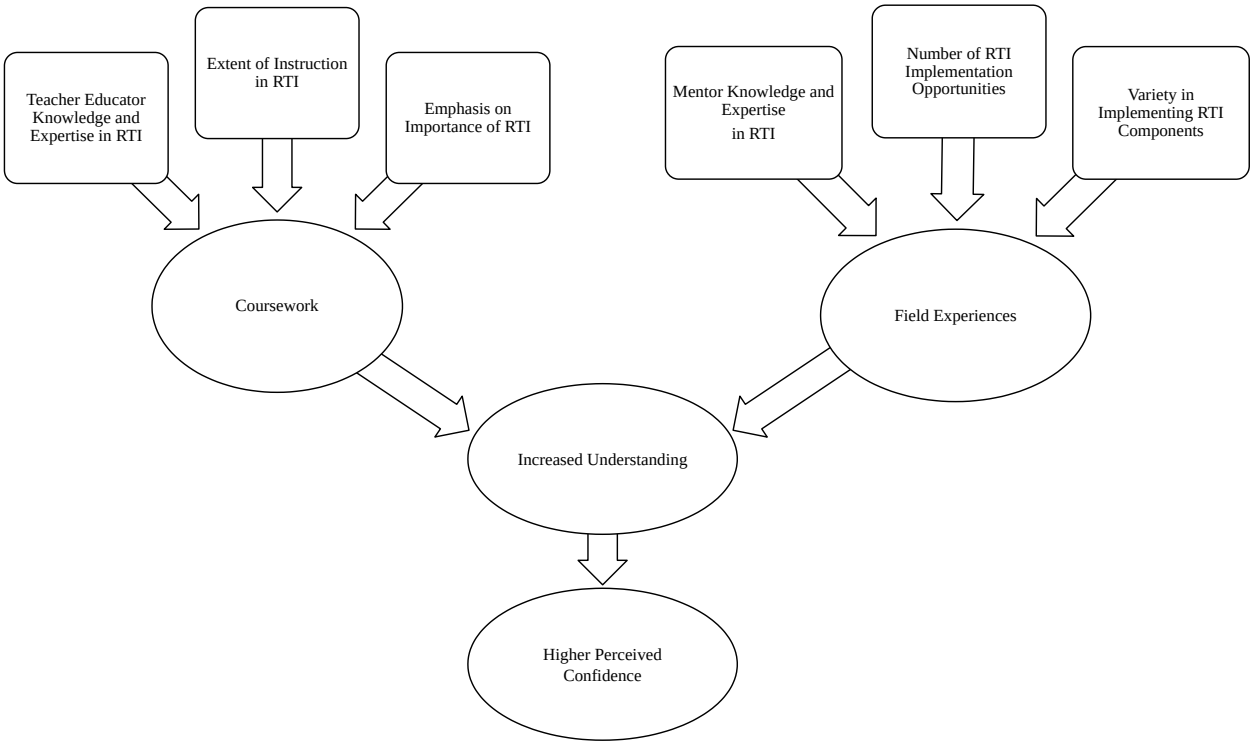

Figure C.2. Conceptual map of aspects of pre-service training that increase perceived confidence

Mixed-Methods Meta-Inference

The results of the quantitative and qualitative strands were combined to provide holistic answers to the four research questions under investigation in this study. Inferences from results of both strands of the study were integrated to form meta-inferences based on the framework put forth by Teddlie and Tashakkori (2009). Meta-inferences were reached by triangulating the quantitative results and qualitative findings. The results from the quantitative portion of the present study found a difference between the perceptions of the special education certification pre-service teacher group compared with all three groups of general education certification seekers ($n = 169$, $p < .001$). The themes that emerged from the open response questions and the focus groups also revealed differences between special education pre-service teachers and general education pre-service teachers in regard to their experiences with the components of RTI.

The focus group with the special education seekers confirmed the quantitative results. The special education seekers reported having more instruction in the components of RTI as well as more opportunities to implement the components during field experiences.

The quantitative results and qualitative themes (e.g., awareness of RTI components, appreciation of coursework and field experiences, and role of teacher educators and mentor teachers in solidifying perceptions of confidence or ability) reinforce the need for preparation programs to ensure pre-service teachers are provided thorough instruction on the RTI components. Classroom instruction should be in combination with real-world field experiences that provide pre-service teachers opportunities to implement the RTI components under knowledgeable mentor teacher supervision. Pre-service teacher comments demonstrated an awareness of the importance of both university-based coursework and field experiences in the teacher preparation program. A participant in the 4-8 focus group commented on coursework in RTI and stated:

> I would have liked to have these things in the class but I would have also liked to have a reason to care about them. I don't want - mean that to sound bad, but what I mean by that is that as a sophomore in college, my priority is not - let me focus on how I can use RTI. Now that I am in the classroom student teaching, I realize how important it is, but that's because I've experienced it. So until I had something that meant something to me, that's when I cared.

Focus group participants also agreed on the value of strong mentorship. For example, in the 4-8 focus group: "My teacher is very intent on making sure that I know how to do everything because the school is very RTI conscious and makes sure that their kids are exactly where they need to be." Participants in the special education focus group concurred about the benefits of

having strong mentoring and viewed mentor teachers as resources, “I would sometimes go to my mentor teacher and just say, ‘Hey, this is what I’ve seen, I’m going to do this. Do you think that’s gonna be effective?’.”

Teacher educators who spent class time on the components of RTI were valued by students. One participant in the EC-6 focus group discussed a professor who provided opportunities for students to practice using screening and progress monitoring instruments in class. In response, two other participants replied that no such opportunities were provided in their courses, “We had zero – I mean I felt unprepared until student teaching.”

In conclusion, an inference can be made that differences exist in perceptions and experiences with RTI between special education certification seekers and general education certification seekers. Differences exist in the perceived confidence with the components and in the amount of coursework and the number of field experiences received. Special education seekers noted more confidence and training compared to the three general education groups. However, all focus group participants seemed to understand the importance of both coursework and field experiences in learning to implement the components of RTI. A student in the 4-8 focus group commented on the need for tying coursework and field experiences together: “An interesting assignment would be to document every accommodation that you gave this week.”

Overall, no participant in any of the four focus groups or respondents to the open response questions stated they wished there had been less instruction or emphasis on the components of RTI. Even special education certification seekers who felt confident in their abilities related to the RTI components wished for more real-world experiences, with a wider range of student ability levels, had been provided. A 7-12 focus group member expressed a similar thought, “I wish screening and working with data had been modeled better, but the best

experience is teaching and getting out there and doing it because in the classroom it doesn't really click until you get in the field."

APPENDIX D

QUESTIONNAIRE

Survey

This survey was developed to measure perceptions and experiences with the main components (e.g. screening, multi-tiered evidence based intervention, data-based decision making, progress monitoring) of response to intervention (RTI). Throughout this survey you will be asked to answer questions about your university coursework (i.e., readings, lectures, assignments, etc.) and field experiences (i.e., practicum, student teaching, internship, staff developments, etc.) in regard to RTI.

1. Gender

□ Male
□ Female
□ Prefer not to answer

2. Area of Certification Sought

□ Early Childhood - 6
□ Grades 4 - 8
□ Grades 7 - 12
□ Special Education (EC - 12)

3. In which school district do you currently student teach? _____

4. In which grades have you had field experiences?
(select all that apply)

□ Early Childhood
□ 1
□ 2
□ 3
□ 4
□ 5
□ 6
□ 7
□ 8
□ 9
□ 10
□ 11
□ 12

5. How familiar are you with the RTI model?

□ Not at all familiar
□ Somewhat familiar
□ Familiar
□ Very Familiar

6. In your opinion, how important is it for a school to use an RTI model?

□ Not at all important
□ Somewhat important
□ Important
□ Very important

7. Overall, how much RTI training have you received across all university coursework (i.e., readings, lectures, assignments, etc.)?

□ None (zero sessions or assignments)
□ Little (less than 3 sessions or assignments)
□ Some (3-6 sessions or assignments)
□ A lot (7 or more sessions or assignments)

8. Overall, how much RTI training have you received across all field-based experiences (i.e., practicum, student teaching, internship, staff developments, etc.)?

□ None (zero training sessions)
□ Little (less than 3 training sessions)
□ Some (3-6 training sessions)
□ A lot (7 or more training sessions)

9. Rate your ability to fully implement the four main components of RTI in a classroom setting?

□ Limited
□ Emerging
□ Adequate
□ Proficient

10. Which components of RTI, if any, were you responsible for during your field experiences? (select all that apply)

□ Screening
□ Implementing multi-tiered evidence-based intervention
□ Progress monitoring
□ Data-based decision making
□ None of the above

11. How confident do you currently feel using screening data such as benchmarks and curriculum-based measurements to make educational decisions for students?

□ Not at all confident
□ Somewhat confident
□ Confident
□ Extremely confident

12. In your university coursework, how much instruction on conducting screenings have you received?

□ None (zero sessions or assignments)
□ Little (less than 3 sessions or assignments)
□ Some (3-6 sessions or assignments)
□ A lot (7 or more sessions or assignments)

13. In your field experiences, how much have your supervising teachers instructed you on how to conduct screenings?

□ None (zero training sessions)
□ Little (less than 3 training sessions)
□ Some (3-6 training sessions)
□ A lot (7 or more training sessions)

14. How would you rate your ability to implement evidence-based academic interventions with students?

□ No ability
□ Some ability
□ Adequate ability
□ I feel very confident in my ability

15. How would you rate your ability to implement evidence-based behavioral interventions with students?

□ No ability
□ Some ability
□ Adequate ability
□ I feel very confident in my ability

16. In your university coursework, how much instruction on how to implement evidence-based interventions have you received?

□ None (zero sessions or assignments)
□ Little (less than 3 sessions or assignments)
□ Some (3-6 sessions or assignments)
□ A lot (7 or more sessions or assignments)

17. In your field experiences, how much have your supervising teachers instructed you on how to implement evidence-based interventions?

□ None (zero training sessions)
□ Little (less than 3 training sessions)
□ Some (3-6 training sessions)
□ A lot (7 or more training sessions)

18. How confident do you currently feel using progress monitoring tools (e.g., curriculum-based measurement) to monitor student academic progress?

□ Not at all confident
□ Somewhat confident
□ Confident
□ Extremely confident

19. In your university coursework, how much instruction on progress monitoring have you received?

□ None (zero sessions or assignments)
□ Little (less than 3 sessions or assignments)
□ Some (3-6 sessions or assignments)
□ A lot (7 or more sessions or assignments)

20. In your field experiences, how much have your supervising teachers instructed you on how to progress monitor?

□ None (zero training sessions)
□ Little (less than 3 training sessions)
□ Some (3-6 training sessions)
□ A lot (7 or more training sessions)

21. How confident do you currently feel using data to make educational decisions for students?

□ Not at all confident
□ Somewhat confident
□ Confident
□ Extremely confident

22. In your university coursework, how much instruction on data-based decision making have you received?

□ None (zero sessions or assignments)
□ Little (less than 3 sessions or assignments)
□ Some (3-6 sessions or assignments)
□ A lot (7 or more sessions or assignments)

23. In your field experiences, how much have your supervising teachers instructed you on how to make data-based decisions?

□ None (zero training sessions)
□ Little (less than 3 training sessions)
□ Some (3-6 training sessions)
□ A lot (7 or more training sessions)

24. In your opinion, how helpful was your university coursework in RTI in preparing you to implement RTI in your field experiences?

□ Not at all helpful
□ Somewhat helpful
□ Helpful
□ Very helpful

25. How confident are you that you can implement RTI in your own classroom next year?

□ Not at all confident
□ Somewhat confident
□ Confident
□ Extremely confident

26. Is there anything related to RTI that you wish had been included or more deeply covered in your university coursework?

27. Is there anything related to RTI that you wish had been included or more deeply covered in your field experiences?

28. Please provide details about the coursework and field experiences you believe strengthened your ability to implement the components of RTI.

APPENDIX E

FOCUS GROUP SCRIPT AND QUESTIONS

Focus Group Script

Moderator: Good afternoon (or morning) and thank you for attending this focus group. Before we begin, please carefully read the consent form for this study. If you are willing to participate, please sign the form. *(Provide participants with focus group consent form- Let participants read the consent form and answer any questions if needed. Do not begin until participants have read and signed the consent form).*

Moderator: Please be advised that this meeting will be recorded utilizing two digital voice recorders. All the participants' names will remain confidential at all times; however, confidentiality cannot be guaranteed in a focus group setting. You may leave the focus group meeting at any time without penalty. If you have questions or concerns, feel free to let me know. *(Wait for questions or concerns).* In front of you, you will find a number. Please utilize this number when referring to another person within the group. For example, if I am in agreement with the person behind card number 2, I would say, "I agree with Participant number 2 because…" or if you are in disagreement you may say "I disagree with Participant number 3 because…" Are there any questions before we begin? *(Wait for questions. Answer questions if needed).*

Moderator: All opinions, statements, or questions shared in this meeting will remain confidential. Please remember to remain professional and be respectful of others' opinions; especially if they differ from your own.

Moderator: If everyone is ready to begin, let's start this focus group meeting.

(At the end of the focus group)

Moderator: That is the end of the focus group meeting. Thank you for participating. Please keep the information discussed today confidential. Are there questions before we dismiss? If you have questions at a later time or would like more information regarding this focus group or study, feel free to contact me at the email address provided on the consent form. Thank you again for your participation. Have a great afternoon (or morning). *(Provide each participant a business card with investigator contact information and the $10.00 Starbucks gift card).*

Questions for Focus Group

1. Tell me about your coursework in screening and how prepared you feel or felt to conduct them during your field experiences.
2. Tell me about your coursework in evidence-based interventions and how prepared you feel or felt to implement them during your field experiences.
3. Tell me about your coursework in progress monitoring and how prepared you feel or felt to do it during your field experiences.
4. Tell me about your coursework in data-based decision making and how prepared you feel or felt to do it during your field experiences.
5. Tell me about your field experiences with screenings and how prepared do you feel to actually do them in your own classroom?
6. Tell me about your field experiences with evidence-based interventions and how prepared do you feel to actually do them in your own classroom?
7. Tell me about your field experiences with progress monitoring and how prepared do you feel to do them in your own classroom?

APPENDIX F

QUALITATIVE TRANSCRIPTS

EC-6 Focus Group
Interviewer, Participant 1, Participant 2, Participant 3, Participant 4

Interviewer: Tell me about your coursework in screening and how prepared you feel or felt to conduct them during your field experiences.

Participant 2: Sorry. One of our professors, she actually brought the tests up to us and let us practice giving them to one another and then we would trade and talk about what – you know, how we did and how difficult it would be if you had – learn another language or had a disorder because some of the questions were even hard for us because they were older or things like that, and so then we understood how difficult it could be for kids as well.

Participant 1: I agree with her, participant number two – I mean because we were partners when we did it so it was very telling when we were doing it. Some of it was really difficult, some of it was really easy, but it had like many names to it and so then it could be really hard and they were looking for a specific answer, so I could see why some of those tests would be hard.

Interviewer: Do you feel like your coursework actually prepared you once you got into the field in your practicums and during student teaching?

Participant 3: No.

Participant 1: Not our class work.

Participant 3: I just remember that when we did do those – like practice the test that would be given to the other students in class it got progressively harder, obviously, for the different students, like what grade level they would be, and by the time it got to like college-level students it was like we couldn't even answer it like for our _____.

Participant 4: No, it was too hard.

Participant 3: So that was really interesting to see how the different tests worked.

Participant 4: I kind of wish we had more preparation for more than just the ESL. That's the course that we had the actual test handed to us that we tested each other. So I feel like we had a lot of work with ESL but not with anything else that we'd be screening for.

Participant 3: Yeah, that's true.

Interviewer: Tell me about your coursework in evidence-based interventions and how prepared you feel or felt to implement them during your field experiences.

Participant 2: *[Laughs]* Not at all. *[Laughter]* We – until we got to student teaching we had never used any type of evidence-based anything. We'd never seen it at all. So that would be none. *[Laughs]*

Participant 1: Yeah. No, I agree. We had zero – I mean I felt unprepared until student teaching, so I couldn't see any of it.

Participant 3: I agree for sure.

Participant 4: It pretty much just told us document, document, document and that was as far as it went, which I understand your doc – your evidence is gonna be different when – since you don't have real students, but some hypothetical would be helpful.

Interviewer: Tell me about your coursework in progress monitoring and how prepared you feel or felt to do it during your field experiences.

Participant 4: I don't think we had anything after – the document. That was about all we got. They didn't really tell us what to do with the documentation, just that we should have it.

Participant 1: Exactly. No – I mean we had –

Participant 1: Yeah, zero – not that I can think of *[laughs]* at all any of our class work.

Participant 2: Participant two agrees.

[Laughter]

Participant 3: Participant three agrees.

Interviewer: Tell me about your coursework in data-based decision making and how prepared you feel or felt to do it during your field experiences.

Participant 2: No, because they never – we never saw any data. No one ever brought out any example data or data at all so we never saw any data until we got to student teaching. So we – they would talk about it, they would talk about you will do this, but we never actually did any of it or saw any of it, just, hey you're gonna do this at some point.

Participant 4: I disagree just a little bit. We had one course where we did actually work with a student, but the standards –

Participant 2: Oh, that's true.

Participant 4: – for the project were unreasonable and very – we got very limited data to work with, so it was really ineffective for teaching us what to do with the data. Other than the one, that was it.

Participant 2: I don't remember. I guess you're right. We did take like – but we didn't actually grade it, did we?

Participant 4: It was last semester.

Participant 1: Which course are you talking about?

Group: Math methods.

Participant 4: Math methods, yeah. Now those course – and _____, we did do that.

Participant 1: Yeah, I felt like that – Yeah, it didn't help at all, so *[laughs]* I wasn't counting that project. So – 'cause like she said, I mean it was very – his expectations were very unreasonable so it didn't really effectively teach us anything.

Participant 3: I agree because we weren't student teaching it, so basically the professor told us to work with, you know, someone that we already knew or just – I don't know, some random kid, I guess. And that was kind of hard to do, and especially since we were living in Denton. If you knew someone else in your hometown, you're gonna drive to your hometown to see that kid and work with them four different times and it was kind of, in my eyes, ridiculous but that's the only time we worked with like –

Participant 2: Actually worked with a student, yeah.

Participant 3: And analyzed how they did and how they progressed throughout their core lessons.

Participant 2: But we also only worked with them four times and they didn't have to be over the same thing, so it wasn't like you were – you were really just seeing how do they do if you're in these – you had to work with them for like 20 minutes, 30 minutes. Did they progress – you know, you're not really like – there's no testing or scoring any type of data to look at, just you looking at them saying did they get better, and that was pretty much it.

Interviewer: In regard to coursework, do you have any recommendations, anything you wish had happened during your coursework to help prepare you?

Participant 1: Yeah. I feel like – I guess some real-life examples. Even if we didn't know who the kids were or if we got to interact with some kids, maybe at the CDL, anything, that would've helped at least give us some examples, but, yeah – no, I mean that's about it. I can't really think of anything else.

Participant 2: Participant two playing off of participant one, and not just – a lot of times the projects, if it was to work with the student it was outside of the classroom so you didn't have anybody to talk to. If we could've done it during class time, like taken a group – as a group gone down to the CDL and worked with the kids and then asked questions to our professor at the same time and understood more instead of our – it was like, hey, do this and then there was no interaction, there was no, am I doing this right, am I doing this wrong, it was just a do this project, turn it in, here's a grade.

Participant 4: Y'all are talking about the child development one?

Participant 2: Yeah.

Participant 1: Yeah.

Participant 4: I had an ESL class that had preset scenarios and it wasn't for testing it was more for advocacy for the student, but it gave you specific information about the student and the situation and you had to like write a letter to the superintendent addressing the situation. So it kind of gave you real-life experience without having to actually go work with the kids. So some scenario-type thing like that where you have to respond without necessarily working with the kid, it was as close to putting something real in our hands as possible. I would suggest something like that – for RTI screening.

Participant 2: Oh, even in – in our of our classes that we're in now, just setting up like – setting up an example, even if it's not a kid, the teacher – let the teacher be the student and then you try to do it with the teacher being the student. The only time we ever really did that was now, and so I get a lot even out of just that even though it's not a real student, just the teacher using the knowledge that they've seen in the real world and then acting like what they've seen, we still get more out of that then reading a book or – you know, there's only so much you can get from that.

Interviewer: Tell me about your field experiences with screenings and how prepared do you feel to actually do them in your own classroom?

Participant 2: I haven't actually screened anybody. We've sat in and watched people do it, but I don't think – I haven't at least done it myself. So I've just seen – we've been able to watch our SpEd teachers or teachers whoever do screening with their kids, but we have not done them.

Interviewer: So how prepared do you then feel for next year when you are a teacher in your own classroom?

Participant 2: Not extremely prepared. *[Laughs]* Not very prepared for that, no.

Participant 1: Yeah, I feel extremely unprepared. *[Laughs]* I feel like next year it'll be kind of one of those like sink or swim kind of moments and it's either we're gonna learn it and we're gonna rock it or we're just – I mean it's not gonna go well. *[Laughs]*

Participant 3: I haven't done it either, like nothing, and we only have a few – just a few RTI students and so I don't feel prepared either.

Participant 4: I haven't even seen a screening in my classroom so I haven't seen any of it in my field experience either.

Interviewer: Tell me about your field experiences with evidence-based interventions and how prepared do you feel to actually do them in your own classroom?

Participant 2: My mentor teacher does do a pretty good job with RTI, and so I have been working with our kids. We pulled them based on MAP testing and the grades that they've gotten in our class and our benchmark testing, and we've put our kids into groups of medium, low and high, and then our kids who have RTI are all in that low group as well and then we pull them in small groups every day for about 30 minutes. So I do feel like I could look at data and determine which kids are low and which kids are in my RTI group and pull groups based on that work with them on what they need. So I feel okay in that part.

Participant 1: Yeah, so I mean pretty similar in my room, usually a few times a week based on just like low testing TEKS. We've done small grouping with like three to four kids who have common struggles with certain things, so I feel pretty confident in determining who need – struggles with what and how to, you know, help correct it, but that's about it.

Participant 3: As far as grouping the students together and pulling them separately, just to kind of build them up in their TEKS or whatever and get them where they need to be, we pull students even in our advanced classes that aren't in RTI and so we group them together based on how they did on their benchmark. And so it's not even specifically RTI students. We just group them based on how they did and who scored the lowest, and it's been really good so far. So – but as far as RTI in our regular class where we have RTI students we put those students together and we make sure that during our go time or our review time for STAAR we meet with them for

the full 30 minutes. So – and it's nice because there's a student teacher and a teacher and so there's two people, so while one's working with the small group one is out circulating with the other students.

Participant 4: If we have any RTI students, I'm not aware of it. We do have some students who score lower than the others. I don't think we do a very good job of re-teaching or pulling them individually. The most we've done is like one or two students at a time, going over the problems that they missed, but that's it. So I don't feel prepared to do it as a teacher.

Interviewer: Tell me about your field experiences with progress monitoring and how prepared do you feel to do them in your own classroom?

Participant 1: So my mentor teacher is not the best about – he's been more so since I've been there – pulling students and monitoring them. We do a decent job of keeping our eye on certain students that we know are RTI that are, you know, being pulled a little bit more often. But overall, we don't really check on their progress as much like we should, so I don't really feel very prepared for that either.

Participant 2: Participant two would like to agree with that. I think that, at least in this school district that we're in, things are so fast-paced and they have not very much time to teach their lessons in, they have a certain amount of days and they have to take their district assessment at a specific date, and so it's really hard for them to progress monitor what they've done other than they can look at that district assessment that everybody takes, but that's over different TEKS each time so it's really hard for them to go back and progress monitor those kids to see if they have grown since the last time we did it because we haven't really gone back to that material in such a long time.

Interviewer: Did you mentor teachers help you at all? Did you – have you seen it in action or…?

Participant 2: *[Laughs]* They're not very great at it, so no, not really.

Participant 4: We get some data back from the district based off the benchmarks and the tests that everybody takes the same and we analyze that data in team meetings, but other than that we don't – I haven't seen my mentor work with it very much, but she does a great job of knowing where each student is. How, I'm not sure. I haven't seen it, but she just off the top of her head knows about where in the class each one is and which area they're low in, so she does like some different seeding or making sure they understand certain concepts, but her process for figuring that out, I'm not aware. But I feel like we – my mentor does use not so much going back to the same information, but the data we get she uses effectively.

Participant 3: Yeah. I will say that in our professional learning community we did check up on our RTI students quite a few times. They set aside time for us to look at how they're doing kind of throughout these four months we've been at student teaching, and I think that's really helpful because if you don't do it as a teacher you just forget, whatever, and your PLC – you're gonna see it 'cause you have to do it *[laughs]* in your PLC. So that was kind of helpful to see how they check for that throughout the year. We just did one where it checked them – how they've – it was a – I can't remember what – was it MAP testing or –

Participant 1: Yeah, it was MAP testing.

Participant 3: They like – I guess they retested or something and they showed how their scores went – up or down.

Participant 1: It was AIMSweb.

Participant 3: AIMSweb. And it just showed how from the beginning what their score was and how they've improved or not improved at all or how they got worse and if they need to move to tier two or not, and a few of our students actually did move to tier two and we realized that their scores went way down, so we saw like how – why they went to tier two, so that was helpful. That's the only monitoring I've seen.

Interviewer: Tell me about your field experiences with data-based decision-making and how prepared do you feel to do them in your own classroom?

Participant 2: We see a lot of database decision-making in the PCL groups that we've discussed a couple times. Every time we take an assessment or really just when we take assessments we look at our – our administration prints out the scores of us and all of our other schools that are the same age group that we're in and we look at our numbers and their numbers to determine which TEKS we need to go back over, which TEKS we need to re teach, and then we collaborate with one another to determine if somebody else's kids did better than yours, what did you do, what can I do in my classroom that maybe I didn't do the first time that you did, trade ideas; so we've done a good amount of database decision-making.

Interviewer: Has that affected your confidence then for next year?

Participant 2: Yeah. I would say that after looking at it, we – during our teacher research project we actually, as a group, did our own unit, and so then after looking at that data I felt much better about actually doing it myself and not just my teacher, knowing how to use the data that I did and looking back at it

and going, oh, I could've done this, this and this. So, yeah, I do feel better about that.

Participant 1: I mean I just agree completely. That's exactly what I was gonna say, so… *[Laughs]*

Participant 3: I will say that the big one where they made the best – or the biggest like decisions over data was the benchmark, and we had a professional development day and that's what – we pretty much spent like the whole day doing was looking at that benchmark data and seeing which students didn't pass, which kids were about to pass, and that's what we made our review time over and that's how we made our groups. That's how we grouped the students was over benchmark data and it's helped a lot, making those decisions off that data because now it's like all our kids that need help are in that one area and it's awesome. So I feel pretty prepared off – just making decisions off data. I feel pretty prepared for that.

Participant 4: I would say that's one of the biggest things that I've learned from the field experience is how to access and utilize the data provided that I wouldn't have been prepared for just from coursework here in the university.

Interviewer: Is there anything about your field experiences in everything – observations, practicums, student teaching – that you think could've helped better prepare you? So if you had – you mentioned an in-service or had seen your mentor teachers demo something or allowed you access to something. Is there any recommendation you have about field experiences that might've improved your preparedness in RTI?

Participant 2: I think we've actually talked about this multiple times since – Oh, sorry. And several of our course works and then when we got to student teaching is that nobody felt prepared for actually like conducting a classroom, being able to do class management. We had had no classroom management at all. No one had said anything about that. So it was hard to get any of the other things in because that's the main – you have to know how to manage a classroom and we didn't know how to do that so we couldn't use any of the other things they had taught us because we didn't know how to manage a class.

Participant 1: One thing that I wish that we got more experience with in our field experience is screening 'cause I feel like that's gonna be the thing that we're gonna obviously need to use, but like she said, we've been so focused on classroom management and everything like that that we haven't really had time to learn or apply any of our other knowledge. So I definitely think if we were to be able to take a class or something in that and then just get more time screening and applying our knowledge that we

have 'cause I feel like we learned all this stuff and we didn't really get to use any of it.

Participant 3: I agree. I agree.

Participant 4: Some way of application instead of just the book work or the busy work would be helpful.

[End of Audio]

4-8 Focus Group
Moderator, Multiple Participants

Moderator: Tell me about your coursework in screening and how prepared you feel or felt to conduct them during your field experiences.

Participant 4: I wouldn't say that we talked anything about screening

Moderator: Participant 4.

Participant 4: Yes. I wouldn't say that we talked anything about RTI screenings or anything. I think we talked – it has tiers. There's three tiers and that was it and then you actually got into the school and you liked student teaching and then you figured it out.

Moderator: So Participant

Participant 3: Three, yep. We did like a sort of like just a brief touch on here's kinda the foundation of what it looks like but not let's take a case study or let's –

Participant 4: Or practice –

Participant 3: use it or none of that happened.

Moderator: That was one of my questions, whether you had assignments or you saw the professors –

Participant 4: No real world –

Moderator: demonstrating it or anything like that.

Participant 4: No real world application. Wish there was. Participant 4 says wish there was.

Participant 2: Yes, definitely. *[Laughs]*

Participant 1: Participant 1 says yeh.

Moderator: Question No. 2: Tell me about your coursework in evidence-based interventions and how prepared you feel or felt to implement them during your field experiences.

Participant 2: Do you mean like in the student teaching?

Moderator: Yes.

Participant 2: That definitely helped with I mean I think with the – that actual experience we actually got to see what was going on, got to talk with other people versus seeing it, so watching a video, reading a book about it is so different.

Participant 1: Yeah. It did make sense, yeah.

Moderator: Anything else?

Participant 1: I can't say that I – I don't know that I used any interventions in my classroom.

Moderator: During your coursework, though, did your professors discuss evidence-based practices and –

Participant 1: Yes.

Moderator: How to find them and what to do and –

Participant 1: Yes.

Participant 4: Oh yeah, we're talking about – Participant 4 says we're talking about in the classroom, not in the student teaching?

Moderator: Not in student teaching. *[Crosstalk]*

Participant 4: Okay, so everything that Participant 2 just said was about student teaching.

Participant 2: Yeah, yes.

Participant 4: So same thing with the last question. We learned nothing about it, right? Nothing about it. I don't –

Participant 2: No, just within our classes that we took here at UNT.

Participant 4: I remember nothing about that –

Participant 3: So within our classes – *[Crosstalk]* Participant 3 – 2 – 3 – we did not. We – I didn't. I don't recall a single time where we talked about –

Participant 1: No.

Participant 4: And Participant 1 says we did talk about evidence-based practices, because you can't even talk about the tiers without talking about their purposes and what you do in those tiers and the tiers –

Participant 3: Barely.

Participant 4: And tiers – yes.

Participant 2: We did more summery, I think. We did more just the brief overall, like what is this, but we didn't really get into –

Participant 3: Why do we care?

Participant 2: Yeah, why is it important?

Participant 4: No, we got into why it was important. I guess what we didn't get into is this very specific strategy –

Moderator: Like how to actual find an evidence-based intervention or –

Participant 4: Yeah.

Moderator: or implement it?

Participant 3: What class are you talking about, Participant 1?

Participant 1: Like even it could be –

Participant 3: I'm serious.

Participant 1: like the online class with Special Education and –

Participant 3: I refused online and – *[Laughter]* I understand now. That's why – *[Crosstalk]*

Participant 1: The online no. I can't remember the number.

Participant 3: Because it was online. They shouldn't have even offered it online.

Participant 4: The online class I learned from that about the types of disabilities. That was the most thing I –

Participant 3: But that was EDSP 3210 so it was a Special Education class.

Participant 4: Yes, but we learned nothing about how to help those children really.

Participant 3: No.

Participant 4: Not until – *[Crosstalk]*

Participant 3: I didn't. You might've went above and beyond and reached out a little bit but I – the teacher that I – we did not.

Participant 4: Mm-mm.

Participant 2: Yes we did. We had that whole project – *[Crosstalk]* on case study –

Participant 3: – your resource notebook?

Participant 4: Yeah. Well –

Participant 2: When did you start school?

Participant 3: Which I dropped out and –

Participant 2: No, I mean it's hard – it's hard, like I would have to pull up all my past assignments and pull 'em up but I do feel that –

Participant 1: I finished that at midnight with Ashley talking over my shoulder. *[Laughs]*

Participant 2: Well, I'm sorry that you did that. I'm just saying we did have projects where we would – we took a kid with specific disabilities, we chose what disabilities we were gonna research, and then we used – we had to research evidence-based strategies for this child –

Participant 3: Different on the last-case study. I did not take that. I did not do that.

Participant 4: *[Crosstalk]* Mine was not like that at all.

Participant 2: When was – when was your class?

Participant 4: It was online.
Participant 2: No but what year?

Participant 4: Oh I don't – I mean my first year actually so that was – this is 2016 so '13, 2013 –

Participant 3: I took one in 2014. I think we had different professors. That's all I was saying. I did not – yeah, I specifically did not do that project. That was nothing that I was required to do.

Moderator: Let's talk about your coursework in progress monitoring. Tell me about your coursework in progress monitoring and how prepared you feel or felt to do it during your field experiences.

Participant 4: Still nothing.

Participant 2: Yeah, nothing. I don't –

Participant 1: Nothing –

Moderator: No demonstrations on progress monitoring, no discussions of progress monitoring tools or how to – *[Crosstalk]*

Participant 2: Other than you know we – this definitely been drilled into us documentation is key.

Participant 3: Yes, that was it.

Participant 4: Yes, that's true.

Participant 2: Like you can't – you pretty much don't even try to do anything without documentation. You pretty much if you don't have documentation you've done nothing and that's been drilled in.

Moderator: Anything else about progress monitoring?

Participant 4: No, Ma'am.

Moderator: Okay, last question about your coursework. Tell me about your coursework in data-based decision making and how well do you think it prepared you do it during your field experiences? – *[Crosstalk]*

Participant 3: No assignments, readings, demos No, not, not in –

Participant 2: Activities on databased decision making? No, no, not at all.

Participant 3: I was not even a participant – *[Crosstalk]*

Participant 2: Probably the farthest thing – *[Crosstalk]*

Participant 3: We did not – yeah, talked about data that affected – no.

Moderator: Tell me about your field experiences with screenings and how prepared do you feel to actually do them in your own classroom?

Participant 1: Participant 1 has almost no experience with screenings. I was given a teacher that did not have any – there were out of the 100 students that we had only a couple of 'em had small, minor 504 plans but no real learning disabilities. Nobody had an ARD. Nobody had an individualized education plan or anything like that. I've asked my teacher a couple times where it seemed like the student might have a learning disability. I would say you know what do we do about this kid? Because he comes in for tutoring every single day and he is not getting it. Doesn't it seem like we need to do something about this and she shrugged her shoulders and said no, he doesn't come up on the tests we run as needing RTI so no, he doesn't get anything. So that's been my experience in my field. I do not feel prepared to go into the field now as a teacher. I honestly will have to resort to asking others what to do.

Moderator: Participant 2.

Participant 2: I went to one of the screenings that was later on, so it wasn't the very first when they were starting to get everything together. When I went it was this group of about four teachers and it was – I thought it was good. We got to talk about different modifications that we can incorporate in our classroom. I feel a little bit better about doing this you know next year whatever it would be. Just I would've liked to see the very beginning of the process.

Moderator: Participant No. 3.

Participant 3: Yeah, I didn't participate in any screenings per se. We did – I did get to see my mentor teacher go through like different accommodations that we'd provide for the student like a sheet for like 504 plan and I've been to an ARD before but as for like screening, no.

Moderator: Participant 4.

Participant 4: I have experience with RTI but I'm in a SPED classroom where 50 percent of my kids have learning issues and 504s or what's the other one? *[Crosstalk]* So I have a lot of experience with that. I think the screening is like going through the ARD and deciding who's gonna go and who's gonna be pushed up a level or put up a level yeah, screening, okay. So yeah, we – my teacher but she's very intent on making sure that I know how to do everything so if I didn't have her and I wasn't at the school I don't think I would know anything, 'cause this school is very, very RTI and –

Participant 3: Conscious, yeah.

Participant 4: RTI conscious and makes sure that their kids are exactly where they need to be.

Moderator: So the quality of your mentor teacher definitely impacted the experiences that you've had.

Participant 3: Yes.

Participant 4: And the school, yeah, yeah, definitely.

Participant 3: We get their data back and we just recently did this where if they were on RTI for math, specifically for us since we're all math, we would say this student is on level with the TEKs that we were teaching. They need to be pushed up in this. I need to be tutoring them in this. This is how I can accommodate them. What tier do they need to be on? Like we spend time and pulled those students and said for specifically for math these are the ones that we want to focus on and the same for reading and science and they all do theirs, too. But us specifically, like we do ARD for the math kiddos, so.

Participant 1: Mm-hmm, but they can only – Participant 1 says they can only be pulled for one subject.

Participant 3: Yes.

Participant 1: So if there's a kid being pulled for reading even if they're struggling in math, they do not get math RTI. They can only be pulled for one.

Participant 3: However, I will say in the dual language – I have a dual language program, so the dual language teachers very much collaborate together so they might do reading with math so like maybe reading a math problem that would be something that they would do specifically because the – there's only four dual language teachers one for each subject in the fifth grade. So if you're in dual language you will for sure only go to those four teachers, so it's very easy for them to get together and say this is how we're gonna collaborate. Whereas for other students there might be three fifth-grade math teachers that all teach regular so they might be with one of those three teachers. Whereas for me if you're in dual language you are with Miss Damien – *[Background noise]* teacher so.

Moderator: Tell me about your field experiences with evidence-based interventions and how prepared do you feel to actually do them in your own classroom?

Participant 2: And that would just be accommodations or modifications type – Participant 2 – we didn't do a lot of just – I think everyone pretty much does it but vocabulary scaffolding just stuff like that that works with any

subject. Other than that, I haven't really been to any conferences or anything learning about that. Have you?

Participant 4: But we do go to PLC and they – there's like an hour every week that we all spend focusing on how we can help our kids in learning new techniques and stuff so that works with our professional development, and so they'll talk about –

Participant 3: They being – Participant 3 – it's the administrators, so the principals, the, you know whoever else in there.

Moderator: And do you feel that that's helped prepare you then for next year in your own classrooms doing activities like that?

Participant 3: I think it's definitely helpful, yes and it's they give you resources and strategies – *[Crosstalk]*

Participant 4: Yeah, exactly.

Participant 3: that you can implement inside the classroom, so they make it very easy for you to be successful. They tried really hard. You would have to try really hard to not be successful, because they give you so many resources that you can use to help students and they're very big about you know working with students who have – need accommodations but also like our English language learners and like it – extra students that maybe need that extra help they focus a lot on them so.

Participant 1: We have a – Participant – mmm, I was just gonna share my – Participant 1 – I'm seeing that as far as me implementing RTI strategy, that's the question, right, like how did I do it in the classroom. I read to students who had – I have students that are in RTI for reading and when we have math word problems I make sure that I read to them. I modify assignments by students who struggle I give them less problems to do. I, you know making sure kids have their calculators without it being embarrassing and announcing it you know so I make sure that's quietly given. That's pretty much all I did, although I probably should of done a little bit more. I had a couple students that were classified as ELL but I could never figure out what for and I understand that just because someone seems like they can speak English very well does not mean that they understand it and it's not, I mean they have the same vocabulary base as the other students but it's just I still don't feel like I've figured that one out yet, like how I would modify for them so.

Moderator: Anyone else anything to say about using evidence-based interventions?

Participant 4: I have a – in two of my classes they're co-teach so there's a learning specialist in there so she's constantly reading to the kids, we're reading to the kids, making sure that they're in the correct groupings. We're pulling people – small groups all the time. We're making sure that the classroom is made in such a way conducive for each child to learn in different classes, 'cause we have different classes where oh we have to pull small groups for that one. It only works like that where this kid has to sit on a yoga ball or this kid needs music or this kid needs the calculator or a multiplication chart or all those things. We make sure that every kid gets what they need for all that, which I would have no clue if I wasn't in that classroom you know which everyone is shaking their head yes.

Participant 1: I wish we had some type of rotation with our – within the school, 'cause we are, believe it or not, all at the same school. It wouldn't maybe sound like it but in the same hallway even so it would be nice to go get that experience, too.

Moderator: Tell me about your field experiences with progress monitoring and how prepared do you feel to do them in your own classroom?

Participant 3: So like I said, my teacher does like the 504 and fills out those, but we also see are these modifications working? If they work, then we keep them. If they don't, we try to figure out some other way to help the student. So like, for example, we just recently put a kid that gave a kid a 504 because the student needed more time to think and just like your basic things that most students needs but he needs it extra because he can't get through it. He gets too overwhelmed by it and so we see you know is that working? Does the – is the strategies that we're trying to use are they working? Don't remember the second part of that question.

Moderator: How prepared do you feel?

Participant 3: Oh, that was the second part of that question. Mm, if I had to give it like on a scale of like percentage-wise, I would say like 75 percent say like, I feel good enough where I could write the 504 but not well enough where I would be able to implement as many strategies or maybe this is gonna sound bad but remember to make sure the student's doing well or remember that I gave 'em that accommodation and we need to be using it or whatever so that's kinda –

Participant 4: My memory is terrible so it's really hard to know what they need, who needs what, did I give it to them today, did I not, should I do that in the rest of the week, what about small groups, this and that

Moderator: Do you document that? Are you encouraged to –

Participant 3: I think we need to.

Participant 4: I don't think we're encouraged to at all.

Participant 3: No.

Participant 4: That will be an interesting assignment for our EDSP class – document every accommodation that you gave this week.

Participant 1: Yeah.

Participant 4: Once a week that'd be crazy. That'd be insane.

Participant 2: With my mentor teacher she's new. I got a new one halfway through, and so I feel like she's been trying to get everything else so caught up that this had been – sounds awful but it's kind of the last thing on her mind, so I think for her it's hard for her to remember to oh pass out the multiplication tables or I mean I – I'm pretty good about remembering certain things but even then I don't know exactly all of the modifications that some of my students have. She has shown me where to look so that's been helpful, but as of – we don't document. We – I try and provide visuals because I know visuals are key, vocabulary, but I think definitely with practice that's when it gets better. Confidence I would say about 60-75 percent.

Participant 1: Participant 1's confidence is maybe 15-20 percent. I think the only reason that I would be – that I feel more confident specifically is because I know the school where I'm going but if I were to say in general like just like a teacher, no I wouldn't be confident. But I do know – I'm just saying like as a teacher if I were not going to the school I'm going to next year, okay, but that didn't happen, do I feel like I could translate my knowledge to any school in the district? No. Where I'm going to next year I will probably have no more than 20 students, so do I feel confident that I can like make an IEP pretty much for every single kid? Yeah that were necessary, you know what I mean? Like I'm not afraid of 20 students to do whatever they need I can accommodate that, but like this whole year I've had 100 students and we have the – that's the thing. At the school we have the most students; whereas, she, you know Participant 4 has the toughest students, the lowest students. Participant 3 has the least – she's got the bilingual students, you know. And you've got students.

Participant 2: Yeah.

Participant 1: You've got a lot probably.

Participant 2: We got low students.

Participant 1: You got lows, okay. And so Participant 1 does not necessarily have any low, like specifically super-duper low students and so we have a lot of them now. Some of them have some specific needs but I mean just I feel like I just learned their names yesterday so.

Participant 1: I'm just saying it's a lot of kids and if I were going – I don't feel confident to face any situation. However, next year I think I will be okay. That's my answer.

Moderator: Tell me about your field experiences with data-based decision-making and how prepared do you feel to do them in your own classroom?

Participant 1: I don't know. Well it's hard to say because I think every school's probably gonna do data differently. In Wylie we had – we – that was part of our PLCs at certain points in time where we would spend the whole hour going through data that they prepared for us and like here it is. Here are your students. Look at it.

Participant 2: She literally printed it for us.

Participant 1: Yes.

Participant 2: The map coordinator –

Participant 1: Color-coded things, I mean just so I mean that's super easy to make a plan when you have that and we –

Participant 3: And she would even give us forms for the plan, like she would have categories for if you see your kids low in this area here's the box you put them in and here – and then here's where you're gonna write strategies to help those kids in that box and da-da-da, like we –

Participant 4: She has specific steps.

Participant 3: Yes.

Moderator: Do you feel like receiving something like that helps you for next year –

Participant 3: Yes.

Participant 1: Yes, definitely. *[Crosstalk]*

Participant 2: My school has classes.

Participant 3: If I didn't have anything in place I might use her or try and yeah, offer something like that.

Participant 4: Mm-hmm.

Participant 1: Yeah, definitely.

Participant 2: I think it was good. It just really gave you the opportunity to look at the data, break the students apart, not just looking at the specific TEKS or whatever they messed up on, but you could really pin-point what exact area do you need to work with your students most? So every student fell in the different categories. Some you would see feel in more than one category so those were the ones that you could see from data that you need to specifically spend more time with so I think it helped a lot.

Participant 3: I – when we got that data, especially when we were preparing for STAR, like the two weeks leading up to STAR, we did a lot of okay let's small group real hard, because we can cluster these students together because they're all low in this area and I could teach them – especially mentor teacher plus me we can split the class in half, and so she could take some students small group, I could take some students in small group. And then she created a resource box and we were able to just it had the TEK at the top and you just pull like whatever resources you need. So if they were low in the area, okay here's something that you can work on to help you. Because at that point it wasn't do you understand what you're learning? It's just let's practice the scale, let's practice the scale, and so that was something that the data was able to help us. Okay, now how can I help these students get –

Moderator: So the data almost drove the intervention you used, so you could pull a strategy based on students' needs?

Participant 3: One hundred percent, yeah, because we knew where they were low in. Because they might have you know I don't know. It's a lot easier to see it on paper be able to see this is where the student is low at and then do something about it. So the idea was if they were 50 percent, we started at 25 percent or below so that meant like maybe there were six questions and maybe they only answered two right, which is at 25 percent, but just for what I'm trying to say. If they were at 25 percent we would say we want to start there and we started with readiness TEK, so we looked where – readiness first, low and readiness, and then we said okay now, if they know all their readiness let me grab some supporting and we had them try then and say okay, let me create my hotspots. These are areas where I'm low in. This is what that TEK means. This is how I would see that question and we went over old district assessments. We made little booklets for that so that you could see those. We pulled resources like she had – we worked to put all those things in place so that it was just easy.

We wouldn't have to waste time. We were trying to be as efficient as possible, and so the data definitely helped us be able to do that.

Moderator: It sounds like you feel pretty confident then going into next year.

Participant 3: I – if the school can provide those things that's what makes it so easy. Like I said, if you have to go out of your way at the school to not care and not do things right with your students, because they pretty much handfeed it to you, so I think that it will be harder like she said, if we're at a school where they don't have those things in place, you know? It's not impossible. It just – it makes – it'll make the teacher work a lot harder than if someone was there to provide it for you and then all I have to do is can I read the numbers and can I see where you're low at and then I'll do my job as a teacher. Okay what resources can I pull to help you? So that's –

Participant 4: Yes. I think that data is such a big thing at our school. We took steps to involve our kids and like Participant 3 said, we took steps to have them own their own RTI, I guess. 'Cause we would take the test, they would take it and we would tell them the TEKS for each question. They would mark if they got that one right or not and then if they got that one – all the questions right for that one they could cross out that TEK and then they – and then the ones that they needed they could come to tutorials for or get extra things for or like okay, we're doing 503 and they would come over and do small group or whatever.

Moderator: Do you have any recommendations about your university coursework? What would you have liked to have seen more of or wish you had gotten during your coursework on RTI.

Participant 2: I would say even just looking at data –

Participant 2: Breaking up the data and looking at individual students I think that would've been a lot of help to actually get that practice.

Participant 4: To get real live data pretend you're a teacher. What are you gonna do about this? This is how you would do this. Where would you – do I get forms to do this? Where would I get resources? If the school had nothing, what would I do? That's basically what all the classes need, I think. They need to be able to tell you this is where you go if you don't know what to do, right? This is where you find this resource. This is where you find this one. What about teachers' pay teachers? Let's talk about that. Really there should be a resource class. This is – I think every part of it – I mean every course should have a resource class, 'cause you need so many things and all they're telling you is have this book and you're just gonna remember it.

Well you're not. You're not awesome so where can I go when I forget? That's what they need.

Participant 3: Okay, so here's my thing. First thing, I would like to have these things in the class but I would also like to have a reason to care about them. I don't want – mean that to sound bad but what I mean by that is as a sophomore college, my priority is not let me focus on how I can use RTI. Now that I'm in the classroom student teaching, I realize how important it is but that's because I've experienced it. So until I had seen something that meant something to me that's when I cared. But honestly, if I looked at her student – Participant 1, 2 or 4's data and saw those students, that doesn't matter to me because I don't know their kids. So I cannot say that I would want to – it's not that I couldn't implement but because I don't know your students on like a personal level I cannot say just because the data shows that maybe they scored poorly in this doesn't mean that they actually don't know it. So unless you know that student you wouldn't really be able to assess that, so I think that having resources is good. I think I would rather have the resources to have in the future –

Participant 4: That's what I'm saying.

Participant 3: Yeah, but – yes, that's what I'm saying but no so much here's some random data. Let's practice some stuff.

Participant 3: Because that point in my career and so that sophomore that was not – I did not care. And I also think that this is just a personal thing but I should have taken that class online. It shouldn't eve have been offered online.

Participant 3: It was convenient because I got to do online but did I bring us through it 100 percent –

Participant 3: Mm-hmm. I took it online and I wish they would've made me take an in-class – I cannot say for 100 percent that I know that it would've been more effective, but I can say for sure that I probably would've tried a little harder if I had seen why I should've been doing this and not just let's do a disability resource notebook. Here's a bunch of stuff that I Googled on this disability so.

Participant 1: I agree with them. I'm just – I have been sitting here brainstorming. I don't know. It's hard to say because you know I've done plenty of case studies in my coursework through other things and I never enjoyed them at all. I mean I guess they served a purpose and some of them were better planned than others as far as you know the professor's backend but – the teacher's backend. All I'm trying to say is I don't know. I don't know what – I think if I were to fix this whole program it would be two years –

or no, not two years, two semesters of student teaching. We'd – no, we did the first semester was every other day –

Participant 3: No.

Participant 1: Well no, not even every other day. It was two days a week.

Moderator: Your practicum experiences?

Participant 1: Yeah, mm-hmm, practicum – yeah and not – while not taking college courses at the same time.

Participant 2: Yes.

Participant 1: Being able to focus maybe even going just Monday through Thursday for two semesters – of intense – yeah, like you're in it, you are teaching, and then maybe there are some like outside assignments kind of that kind of start and go with you throughout the semester, some reports that you have to make up about you know whatever your – what other you know ESL stuff or you know ARD stuff, you know different specific things that you have but until you're in the classroom you don't – there's nothing that you can do to make – to really make us care other than talking about it. Does it get your ready for it? No, but I honestly can't say. You have to just be in it.

Participant 4: You just have to know your kids. I think that's the biggest thing is you really don't know. You can look at data but unless you know your kids that's really where you're going to pull your information and pull how you teach it. You have to know their learning style. I don't know.

Moderator: Is there anything else, recommendations or suggestions for field experience you would like to share?

Participant 3: I definitely think that a good mentor teacher like Participant 4 mentioned earlier makes a huge difference. So I know some of us didn't have as a great of an experience because we leave – the students you know they – she couldn't see you know how to implement whatever strategies because she didn't have those students to implement them on; whereas like for me I had a lot of students that I could use strategies with because all of my students are English language learners so – like when I first got told that I was gonna be under a bilingual teacher I was like, I think they have the wrong – I don't think they meant me, like I don't speak another language like they obviously didn't mean it, but it's been a great experience for me because I've gotten to see so many things and having a mentor teacher that can do those things and like help me feel comfortable to go into teaching as a first-year teacher I think that's what makes all the difference.

Participant 1: I don't know. Participant 1 doesn't know how this will really – how this could translate across into the future, but this year specifically we had how many math – fifth grade math teachers in the same building? We had one, two, three, four, five, six, seven – eight, yeah. Eight – so we had eight of us in the same wing and from the fall of 2015 until the spring of 2016 we were with one mentor teacher which is fine. What that did was it allowed us to get really close to the students that we have. You know we have really great relationships with them. However, I think that those relationships would've maintained if we were on a rotating schedule, right? Two weeks with you this mentor teacher. Two weeks with the next mentor teacher. You're kind of working down the hall. You don't lose contact with those students. You're still seeing them in the hallways. You're gonna see them again in a few weeks or whatever it's gonna be. But I mean if we were rotating I would've had the experience of seeing how you know bilingual teacher operates. I would've had the experience of seeing how a classroom operates. Like some of the classrooms had fifth – all four classes were completely different. Wide advance, one-fifth advanced, one-fifth regular, one-sixth advanced, one-sixth regular – totally different planning. How do you navigate that, you know? How do you navigate that you have all – you know the Special Education students.

Participant 4: It's true.

Participant 1: I want to see – and everyone knows Participant 4's mentor teacher is phenomenal; you know? I would've loved to sit in there minus of course yes, we did go for maybe a period and go sit in and watch the teacher – *[Crosstalk]* It's not the same as getting involved and having that mentor teacher force you to do things you're not comfortable with to grow, and I think that a rotation schedule would've been great.

Participant 3: So maybe first semester I think it would've been really good to maybe go around –

Participant 1: Do that.

Participant 3: and do a little rotation –

Participant 1: Yeah.

Participant 3: And second semester you would stay with –

Participant 1: And stay with one.

Participant 3: one specific teacher.

Participant 1: Yeah – *[Crosstalk]* make exceptions.

Participant 3: Because here's what happened. Even in our coursework, okay, we took two ESL classes last semester, one math class – what was the last one?

Participant 1: One reading.

Participant 3: One reading class. I'm not gonna say what classes were good but there was only one class that we learned something.

Participant 1: Mm-hmm.

Participant 3: So that being said, I don't understand why we were spending so much time coming up here and you know being here from 11:00 to 5:00 for six hours a day. Six hours of the day back-to-back-to-back instead of being in the classroom. I wish we would've pushed the program – I wished we would've pushed more – I think we could've pushed the coursework to when I was a freshman or a sophomore or junior, doesn't matter, okay. One of those times where I could've taken those classes, because now that I was a senior and I was halfway in the classroom I can probably vouch for all of us and say that we would've much rather have been in the classroom –

Participant 1: Yes.

Participant 3: all day every day last semester than two days a week and two days a week.

Participant 1: Absolutely, yes.

Participant 3: Did I like the Friday off? Yes, because I needed time to ease into it because I needed the extra day to like recover, but coming to the classes I know we were all just not – why would we want to drive all the way out here? Most of – I didn't live here. I know Participant 1 didn't live here. I'm not 100 percent sure – Okay, so 50 percent of us were driving out of our way to come up here instead of being with our kids or being able to see a rotation or being able to see different grades, like I think we would've – now that we've come to the end of the semester we've gotten a little bit of experience, like okay now branch out and go to a seventh or eighth grade classroom or go to a fourth grade classroom. We were able to do that but it was two weeks – *[Crosstalk]* until we were done and we went for two days and then that was all we saw. So going once a week – not once a week, going one time out of the entire semester and seeing one teacher that's great but I think I would've loved to have seen okay, my teacher was really good. Now let me see how it could've gone poorly. Let me see like a – not – you know what I mean? Like it could go poorly with other schools or other planning, like our planning period works really well

and our teachers are able to collaborate and we're able to use those strategies together and say oh this is what I would've done if I was in that situation but it's not always like that because we got to see a planning period at a different not a rival school but another intermediate school and it did not go – they were not at all planned and they talked about no data, brought zero resources. They just were – you could just tell it just didn't work. And one person can make a difference but one person can't make everyone else care, so just seeing the way that our school works and I'm sorry I'm tangent. It's just all the things coming out of my mouth right now.

Moderator: What about your observations and your other practicum experiences? Do you think you had an opportunity to see a variety of teachers –

Participant 1: No.

Participant 2: No.

Participant 3: I'm sorry, other practicum experiences other than student teaching –

Participant 1: Uh-uh, doesn't have that.

Participant 3: Yeah, it was just – it's just this –

Participant 1: Just one class.

Participant 3: The one semester we go five days a week that's the fullest we've ever been, but we were like half in, half out last semester – last semester and that was it.

Participant 4: We were only with one grade, we were only with one teacher, we only did that once –

Moderator: So that might be a recommendation that –

Participant 3: Yes.

Participant 4: More rotations.

Participant 1: Right, exactly.

Participant 3: It's basically what I was getting at.

Participant 1: Because the thing is Participant 1 says you know did I have the best mentor teacher? No. Was she as – you know so awful that I need to go you know call Jim Sutton and – Tim Sutton, sorry. *[Laughter]* Don't tell him I

said that. I'm very tired emotionally and mentally. All right, Tim Sutton and you know throw a hissy-fit – no, like sometimes you know you've got to figure out how you're gonna work through things, and I never expected my mentor teacher to be the, you know all mission, all powerful white person that's gonna make me become a good teacher. It's up to me but so I'm not gonna complain about it. I am gonna complain about these two hooligans laughing while I'm trying to speak. I have the floor.

Participant 4: Yes, P1.

Participant 1: Thank you for nicknaming me.

Participant 4: You're welcome.

Participant 1: What I'm trying to say is if we have rotations I would've gotten around. It would've been easier to say yeah, okay you know my main teacher, my main mentor teacher is not you know perfect but I'm still learning so much, you know. Whereas I've gotten to a certain point this semester where I was like okay, I've capped out. At what – I'm gonna learn from this lady and I want more and I don't – I can't get that without offending somebody and so that puts me in a bad spot but.

Participant 4: True.

[End of Audio]

7-12 Focus Group
Moderator, Participant 1, Participant 2, Participant 3, Participant 4, Participant 5

Moderator: Please tell me how your course work in screenings has prepared you to conduct them during your field experiences and how confident you feel in doing them.

Participant 3: So I'm not sure if this is exactly what you're talking about because I'm just not as familiar with the terminology, but as far as formative assessments go, if that's part of it, in our program at Teacher in Texas we're encouraged to use the five-E instructional method, and so part of that is an e-valuate at the end: so we're encouraged to use – get an exit ticket with a couple of questions that cover basically the objectives for that day or for that lesson.

And then also using different formative assessments that are technology based: there are a lot of – they just introduced a Clicker program here and anything – our program in the course work has encouraged us to use as much technology as possible, so anything like Kahoot or Quizlet or anything like that we're encouraged to monitor their progress.

Participant 4: Well, the program is like the pre- or post-assessment – what do they know – and then by the time you're done did they get the information they needed to know? And then using all of that – formative examinative assessment – just to gauge how our students are doing.

Participant 1: So for our PDI class we took we took – we did what's called a unit plan and for that we got to look at all of our grades from the final assessment, and so we got to see, based on those grades, whether or not what teaks were achieved and what objectives were achieved.

Teacher in Texas has been really good about teaching us how to backwards plan. So that means that when I first start planning a lesson I get to look at what teaks do I want to cover, what objectives do I want to cover, and then I make a test based off of that – or even star questions – adding that to it – and then from there I plan out my slide show and then from there I get to plan out my actual activities.

So when I plan my lesson plan I plan it with this final goal in mind, and so at the end when I see that test I know that this question would wind up this teak which is also lined up with this objective, and so that will tell me, "Yes, I did achieve that goal," or "No, we're failing in this one," so we might need to go back to that.

Participant 1: I feel very prepared.

Participant 2: Yes, I'm taking a class called *Instructional Management* and *Classroom Management – Instructional Strategies in Classroom Management* – and in that class we did learn about assessment and formative assessments. And basically, like the other participants said, having the pre-assessment – so coming in with maybe a KWL chart where you're asking them what do they already know, finding out what they want to know or what they need to know and then also what they've learned.

So it is important to come in first and learn what the students know and where they're at. And then after that – learning the information – coming back with a formative assessment and finding out what they've learned. So I definitely have done Kahoot quiz to see what they've learned, I've definitely had some tests that I've worked on – but I definitely think that my course helped me in that. I feel like I could have been a little more prepared with like different forms of assessment because I feel like I always have that same – either a test – but I would like to have some more diversity in those assessments.

Moderator: Tell me about your coursework on using evidence-based interventions and how prepared you feel implementing those during your field experiences?

Participant 4: Our program prepared – like they've given us all those strategies to, you know, cooperative learning, group participation – you know, sometimes that's the best strategy to use during a unit, but also that individual work is necessary too. I mean I feel like they've given us the tools to use.

Participant 3: I feel confident in it as well. In our program they've even gone into how to group students if you're doing group work, who you should place with each other based on their levels of understanding and their personalities. And the give us lots of different ways to group the students.

And then Participant 4 was saying with any cooperative learning they've given us lots of strategies either for reviewing or just getting projects done and stuff like that that uses those techniques. So yes, I would say that I feel confident.

Participant 2: Yes, I agree with Participant 3 and 4 that I do feel confident in the – like you said, with the research-based instruction and using research to show how this is proven effective – especially with group work, knowing that you need to group students in a heterogeneous format so that you're grouping students who are at different levels and abilities in order to allow them to model based off of what they've seen in other students.

So I think that I have been prepared in that regard. I think that I could still learn more, honestly, because it's a whole different game when you get into the classroom and you start seeing students and how they're working and whether or not that student who, like when you do group say a high-level student in that class and then you group them with a lower-level student, how that lower-level student isn't just depending on that higher-level student and how that student is – whether or not they're actually really being a part of that group and actually contributing to that group.

So there's a lot of other factors that come in I think after having the experience of teaching that I would love to go back and re-go through those same research and reassess how effective it is in actual instruction.

Participant 1: Okay, I'll say that I agree with all the other participants just in that our program has prepared us pretty well to be able to group students and to give them some idea of assessment so that we can get an idea of, "Okay, yes, they are learning this," or "No, they really aren't understanding this," which leads me as a teacher to be more reflective on what to do next.

And so, yeah, I'd say I feel pretty confident and I think it's been working so far for me in the classroom.

Participant 3: I would just like to basically agree with Participant 2 – Participant 2 said that they would like to learn more about it – because I kind of feel like I know the rules of it but applying it is harder and actually figuring out if it's working realistically is harder.

So I think the course work prepared me for the actual structure and rules of it but the same: I would like to learn more and know more about it.

Moderator: Tell me about your coursework in progress monitoring and how prepared you feel or felt to do it during your field experiences.

Participant 1: Okay. I will say that I feel very prepared in that. I feel like our program has given us a lot of different methods to us with students. I think that PBI was very big on differentiation and students with different needs and learning how ARDs work and how IEPs work and how every student has their own needs and learns in their own different ways – learning styles and things like that – but I will say that since I've gotten into the classroom I can definitely see that it doesn't work out perfectly the way you thought that it would.

And so sometimes I come to the end of a brick wall and I'm like, "Okay, now what?" So I wish that there were more methods but I'm not even sure that all of that can be taught: I think that some of it comes with experience.

Participant 2: Yes, I agree with Participant 1. It definitely comes with experience I believe. I believe that – especially in my content it's a little harder sometimes to monitor progress because I don't have a whole lot of testing going on: it's usually performing, speaking. So you can see growth but it is harder sometimes to see that growth with students who may have English as a second language and students who are struggling with the language in itself.

But I do think that I've started to see within my program how to apply some of those strategies and see how students are doing from the beginning and tracking their progress later on. So I think that I still have a lot to learn in that aspect, but I do think that I feel pretty confident in seeing that.

Participant 3: I wish that I knew of – or was as familiar with – of a larger variety of ways. Because even if I'm using different formats like Kahoot or a quiz or a couple questions on a worksheet: those are all just questions. So some students might understand it on a certain level but they're not able to express it that way. And all of our – in the classroom I'm in right now – all of our summative assessments are just exams with questions.

So I wish that I had more ways to incorporate projects and I guess more of a variety of ways for students to show their understanding, and that would be my major thing that I would like to work on because I think, like Participant 1 said earlier, in our course work that we've done we're very used to looking at the TEKs and making objectives and making assessments. So everything is aligned I just wish I had more ways for the students to express what they know.

Participant 4: I agree with Participant 3. Just because from experience this last unit I taught I had them draw out – you know, I have a lot of kids that love to draw, so I use that as an assessment, you know, "Are we understanding what these words mean? Can you give me a picture of it?"

And some of those that had a harder time conveying it to me in words were able to draw these pictures and show me that they understood what the meaning of these words were. So I was able to kind of be like, "Okay, so they can't convey it to me in words but they do understand what these words are."

So with that assessment I was able to gauge whether or not I needed to move on further and if it was okay to move on. So I just think having more ways to do that. I think we're just too based on teaks and testing that trying to find the different ways to gauge progress is hard.

Moderator: Tell me about your coursework in data-based decision making and how prepared you feel or felt to do it during your field experiences.

Participant 1: So – okay, explain the database. Are you just talking about the numbers at the end?

Participant 1: Okay. I think I had the most training in PBI when we did our unit plan and we got to align the TEKs and align the objectives. And based on the questions on the test you could see, "Okay, they did really well on this objective or they did really well on this TEK." That was a good way of us making graphs and making charts of every single question, what percent got this one, what percent didn't, did it change from class to class? That, for me, was a really big eye-opener.

And so I felt really prepared to do that again and I was really encouraged when I came here and I got to talk to some of the teachers here and realized that they did the same thing only like for star scores or other things like that.

So I do feel like they're very similar and so I feel really prepared and not – I guess I'll say as far as behavior wise I have no idea how to track that stuff. I know that I have a lot of students who are always gone – I work with seniors – so they're gone for senior stuff, they're gone for _____ stuff – they're gone for a hundred other reasons – and like trying to keep track of that seems almost impossible for me. So I feel really unprepared for that.

I really would like to have been trained more, but that is also a thing that changes from district to district so I can't say that – I don't even know if there's a way that they could have necessarily prepared me for that but I definitely do feel unprepared for like keeping track of who's here and where they are and – although I can like notice trends in the progress – I haven't gotten to like sit down and actually make data for that – you know, they never tell you about that.

We were also trained in looking at IEPs. So if they told us that a student has behavioral issues then we were trained in, "Okay, I might make them a quiet corner," or "Okay, I might just like tap their desk and then they know, "Okay, now I have to calm down."" It's just like little ways to remind them.

So I'll say I was prepared in that, but as far as like differentiating instruction when people consistently miss I don't really think I was trained in that kind of thing, which is what I've run into.

Participant 2: Yes, I agree with Participant 1 with dealing with – I especially think in my first period class because it is a mixed class – I'm having from 9th grade to 12 grade and it's a speech class – so I have a hard time – especially with the levels but also attendance – people who have dropped out of my class and then constantly getting new students and then also having students who are late all the time – so I have a difficult time keeping track of what students are needing to be caught up on certain things and then students who have already been in class, know what they need to do and helping those students and then students who aren't there so I can't really do much with them.

So I think I would have liked a little more training in that. Right now I think that what's been really helpful is my mentor teacher: he's given me different tools like – especially for like students who have come later – worksheets that they can do, different assignments, alternative assignments that they can do – so that we can help those students who are coming in later and help them with catching up to the rest of the students.

So I think that that's definitely something that comes with experience. You really – every class is different so – behavior wise – it's different for each class, but I think that as I'm experiencing it more all of the things that I've learned have been tested and so I'm really learning now.

So I feel like honestly the best experience is teaching and getting out there and doing it, because in the classroom it doesn't really click until you get in there and you're like, "Wow, this is very difficult and it's definitely a managing thing."

Participant 3: I feel confident and prepared in collecting data on various things, and I don't feel prepared in interpreting that data efficiently and then putting whatever that is into action. It's kind of like I can collect information and then I don't know what to do with it exactly.

And I'll handle things in small pieces or on a personal level where if I see a student – and my mentor teach is very, very good at knowing his students very well and being able to, just by looking at – just scanning their test grades – and he knows, "This student normally scores this way and they didn't do as well on this test," and then he'll casually just speak to them because he has that personal connection with them and that's great.

And I feel like I can operate on that level where if I just personally notice something I'll try to take care of it but I don't have any like official protocol or like official monitoring of that data that's been collected or something like that.

Participant 4: I agree with all three of them because you get all this data and you're wondering, "Okay, when's the right time to contact parents? When's the right time to contact counselors?" You know, what's the breaking point? He's had five absences, he has this grade. It's like we get all the data but what's next? Like how do we know something's too far gone and we need help or can we handle it in the classroom? It's like I think some more training would suffice in that area.

Moderator: Tell me about your field experiences with screenings and how prepared do you feel to actually do them in your own classroom?

Participant 1: So when I was first observing I watched this for the very first test and I caught students cheating and to me that told me a little bit about like how they view like just getting the grade versus like actually learning. And for me that was one of the things that I wanted to break when I first went in there.

And so since then I've completely changed the way we do testing and stuff. But – and so in my experience with screening and just looking at the test grades I can tell that like repetition is a must and I try to figure out where my students are. We give like these mini quizzes at the end of every lecture so I'll ask them something from the lecture and they'll say, "Oh, what has sugar?" And they'll say, "Carbohydrate," or something like that. And so sometimes – like they like to shout it out and so you can hear the shout, you can hear the shout, and then they'll come to this point where you'll ask a question and it gets kind of quiet or you'll hear that like, "Sugar?" like you know, like that questioning. And so then I'm like, "Okay, this is where I'm going to stop."

And so when I'm trying to figure out like where my students are – we like to ask lots of questions in general – or there's a lot of things that they should know – that I want to assume that they know in general – but rather than just assuming I ask questions about it. And so I go like based off of feedback.

And I know that that's not the best way all the time so sometimes when they first come in I'll be like a pre-assessment, like, "Okay, tell me what you know. It's not for a grade but just tell me what you know and I'll ask you a few questions." But usually it's just like question out loud, tell the class, and then just kind of getting to hear where do I need to stop because it's hard to know all the time what kind of questions to ask.

Participant 2: I definitely think observation was very helpful because I was able to see three different teachers in action and see how the different teaching methods work in classrooms. Also seeing different subjects helped as well.

I think that seeing also when you build that connection with your students and you do get to know your students, also you kind of tweak – you kind of get to know the students and how they respond to certain things.

And so I really enjoyed seeing teachers who were perfected in – not perfected – but just used to their actual form and like how they do things. So the teachers adapt to the students but also the students adapt to the teachers, so every teacher was different and I saw how it worked for them – certain things that worked for them, certain things that didn't.

I think, especially in my content, knowing what they know – their prior knowledge is very important – and seeing that by allowing them to speak up, having class discussions, learning how they're learning information and how they are able to show how they've learned that information is really good.

I did an assessment today – it was kind of like a pre-assessment where I was like, "Okay, tell me what you know." And a lot of them are like, "Wait, wait. Did we learn this?" But if I told them, "Okay, explain what we talked about when we talked about this," and they're like, "Oh, okay." But if it was too focused on like, "Answer this question, answer this question, answer this question," it was too hard for them or it seemed more difficult to them.

So I definitely think that in my area that observation and student teaching has totally helped in my understanding of how best to adapt and help students learn.

Participant 3: I feel like I've been trained in ways to do effective pre-assessment and I don't use them as much as I should. In the project-based instruction class that we took at Teacher in Texas it was a very formal pre-assessment: you do the project or the lesson and then you give them the same post-assessment; so you're very clearly able to monitor how much they learned.

And I have not done that during student teaching – like given the same pre-assessment and post-assessment. I use more of like an informal thing like Participant 1 where I'm just wanting to hear what they're saying and what they know, where it will be like the very beginning or introduction of a topic or lesson, and I'll do like an engaged type activity, and then I want them to tell me what they know about it and things like that.

You know, we learned about doing like the KWL charts and stuff like that and in actual student teaching I haven't done very much like formal pre-assessment.

Participant 4: I found that giving a kid a piece of paper every day kind of throws them off because they're like, "Is this a grade? Is this a grade? What are we doing?" But I also found that sometimes just the bell ring or have them write their thoughts down and having a group discussion about, "What do you know about this topic?" and getting everybody's input and just seeing, "Okay, exactly where are they? What do they remember from previous grades that they've got this information from and where do I need to start from?"

And usually I'll build my lessons from each of those starting points where I think that we need to start from or do we need to go back and cover some of the basics and then move forward.

Participant 5: Tough question. I think just student teaching I guess would be like the biggest thing. My mentor teacher was a lot of like project-based instruction so it's kind of hard. I think kind of like what you were saying, it's hard to really understand where they're at like as opposed to giving a pre-test and a post-test.

But through the project I think it makes it a little bit easier to see, "Okay, they don't understand this: they understand this," and then move from there.

Moderator: Tell me about your field experiences with evidence-based interventions and how prepared do you feel to actually do them in your own classroom?

Participant 2: I think my mentor teacher was very helpful in that he respects the fact that he wanted to be there for me and supporting me with whatever I needed, but also backing off and kind of letting me run the classroom. And I think that was probably the best thing that could have happened to me because I was like, "Wait, wait, wait. Come back."

But I think whenever he did leave and I was like, "Okay, yeah, let me take over," not only gave me the opportunity to really put those things that I've learned into practice but also gave me – the students – the opportunity to see me as a teacher and for me to deal with them – especially with behavioral wise and like classroom management – which is very important – it helped me to gain that confidence as a teacher. So I think that I was really grateful for him to give me that chance.

Participant 3: I think – when I came in my mentor would do very frequent quizzes, almost to the point where it was every block. And I just didn't want to do that: I didn't want to give them that much to stress about all the time. So I backed off of them a little bit and then the students, you know, they would wait until right before the test to learn everything and I could tell that they weren't – they had no sense of urgency with their learning.

So then I kind of reincorporated – but not as much as every day – but I tried to use that a little bit more because if we do a Kahoot and it's not for a grade or something it's not as much motivation for them to take the time to really thoroughly learn it.

Participant 4: With grades not so much. Just behavior I guess with field experience: just learning to manage the kids' behaviors, because I have some doozies. And for the most part I have pre-A/B students so keeping them on top of their work is – they do pretty well on their own, but it's the attitude and the behavior and learning ways to deal with that and just how my instructor now – my mentor teacher – can just look at them and they're just like – they stop.

But with me I have to correct them several times and I just feel like the classroom management is – it's going to come with time: it's experience more than anything. Like you can be taught it in different seminars and different classes but until you get the chance to go out and do it and realize, "Okay, you've got to learn: it's just going to come with time."

Participant 5: I can't think of anything.

Participant 1: When I first walked into the classroom I realized that they had a very set schedule and so it kind of went quiz and then instruction and then they had a lot of free time, and so in my mind I was thinking, "Oh, all that free time is going to be activities from here on out." So I was thinking 5E, but instead I want to end that E at the beginning of the next day just so that they can stay consistent with quiz at the beginning.

And so – and like I said we also end with that little like quiz but it's kind of like there's questions on the board and we say it out loud. And so having that feedback at the end and then having that official – the feedback kind of at the beginning – just like spit it back to me.

And for me that was really – a really good way for us to like always – like for me to always know like, "Okay, they really go this." Or like, "No, they didn't get that yesterday. We can come back at the beginning of next time and get that again." It made it really simple to like know exactly where they're at.

Moderator: Tell me about your field experiences with progress monitoring and how prepared do you feel to do them in your own classroom?

Participant 5: So my mentor teacher is very unstructured and for me it's hard to be able to do any kind of – like seeing how her students are because of that – so it's just like I don't know how to assess – and I think because she's been

doing it for so long she has her ways and she knows her students really well because she's had them for two years, so it's different for her: she can probably just look at them – or like she just knows by looking at them that she knows what they're thinking.

But for me that's not the case so walking into that classroom has been challenging. So I would like to have a more structured classroom so I am able to track for everyone.

Participant 4: Yeah, my mentor teacher has like Excel sheets that she knows if a kid's behavior is off she'll check that day or write something down, you know, "Why is he acting this way or what's going on? He's missing a lot of classes. Do I need to contact the parents?" And hopefully when I get into my classroom where I can make those Excel sheets to be able to monitor progress – not only just with grades, behavior, attendance – and that's my goal and what I've learned, so – and seen from her.

Participant 3: The only thing I want to say is that it is kind of strange to find the balance. Like Participant 5 was saying, my mentor teacher has their ways established and even though it's great to model after and it works for them and I respect it it's not necessarily what works for me or what I would choose.

So it's kind of strange to come in and they don't know you and they're used to this certain way that the classroom is set up and that it runs, and then it's hard to figure out where you fit in there, and especially where I think the question is about progress monitoring. So he's able, because he knows them – he can talk to them about small things and he knows how they usually perform, what they're like – some of them he's know like their whole lives – and so it's a little harder for me I guess to feel like I can intervene.

Participant 2: Yes, I agree. I do think that my mentor teacher has a certain way and style that he has with dealing with the students. And I'm very different. And so for me it's more of like how like, "Okay, I know that this student – I'm getting to know this student. I'm starting to see these patterns of behavior," so I kind of like just track it in my mind, but I don't have any formal tracking of like how this progress – other than attendance, which is what I take for myself – but a lot of the data and a lot of the information on the students I don't have access to so it's hard for me to know, "Okay, this student has some issues at home, this student is dealing with this."

I honestly learn more about the students from what they've told me than anything. And so I think that's what's really helped me is just being around the students and getting that chance to know how they are progressing and what exactly they're dealing with in that time.

Participant 1: I agree with most of the participants in that my mentor knows her students very well, so if I tell her, "Hey, this student and I had a problem today," she's like, "Oh, well that's weird. He's usually so good." You know. And so she – then we ended up like going to the counselor one day and finding out that there's a whole thing at home.

And I think I'm like Participant 2 in that I kind of just have a mental check of something's off. But we really don't have an official way of tracking and I feel like I would like to see that.

Moderator: Tell me about your field experiences with data-based decision-making and how prepared do you feel to do them in your own classroom?

Participant 1: I guess I'll say that when it gets closer to the end of the nine weeks – when students are failing we have to send out a nice little letter to their parents and we also have to pull students aside and have meetings. And so that's one of the decisions that we get to make based on how their grades are happening and things like that.

But before it gets there hopefully we get to make some decisions to be very reflective. So I don't know. I think that she's really good and how we can talk about, "Okay, so this didn't work," and so she was like, "Oh, well, I think you should try to do a something-point curve," you know? And it's like I hate the idea of a curve just because it's like – but anyway – sorry. We'll have to circle back to that instruction.

But just seeing her – like we have to move forward but then also we're not going to punish them for this, and I thought that was really good.

Participant 2: I definitely think that there is decisions that have been – that I have to make in class based off of what I know about the students. And I think that he's helped me in being not so – like being lenient but not being so lenient that I'm bending over backwards trying to get the student to do the work. If they want to do it they're going to do it. I can give them the opportunity, I tell them when they can do it, tell them to come to me at any time – I'll remind them even – but until they decide to come to me it's not a whole lot that I can do.

So I go to them and I say, "Hey, I know you've been having this situation. You can do the speech with me outside, you can give me an alternative assignment. Let me know what you need and I'll be here for you." And so I've seen that to be most effective with the students because it shows that I care and that I'm not going to allow them to just fail.

Participant 3: I don't know if I have gotten much information from my mentor about actually like looking at data, collecting data, interpreting it – all of that. But I see the way that he acts to try to work with individuals and to help them. And I feel like he looks at like passing and failing as a cutoff: if someone's failing he'll talk to them.

And then above that, normally, if it's not at-risk then it's normally not a problem. Then he starts out by talking to them, seeing what's going on – and he's very just talking one-on-one motivating for them.

And then if nothing happens I've seen him send home two letters to parents just asking them to cooperate and to encourage the student at home, to get more involved with their work and studying and things like that. So that's what I've seen from him.

Participant 4: I guess I haven't seen a lot. I got kind of lucky and within like three weeks she kind of gave me control of all the classrooms and we found that her not being there makes it easier for the kids to see me as the authority figure in the classroom. So she checks in once in a while. And we do have talks and she does stop by an all that, but for the most part I haven't really seen anything based on that.

Participant 5: Yeah, mine is – I also haven't really felt like I've gotten a lot of information about that. But mine uses failing as motivation. So she doesn't really – she has due dates but they aren't set in stone, so if it gets to the end of the nine weeks if people still haven't turned things in she just puts a zero in and then they're like, "Oh my goodness, I have to turn this in." So that is the only thing I've really seen.

Moderator: Do you have any recommendations for improving your course work in response to intervention?

Participant 4: I would say more training just overall. You know, information on it. I mean they touched base a little bit on RTI but we didn't spend too much time on it.

Participant 4: I know about RTI. But I was one of the kids that went through the whole RTI process, so…

Participant 3: That's what I was going to say. When we were taking the survey before I was like, "What are these?" And now after talking about it I know that I've learned and practiced it just not in those defined ways and with that terminology.
I think we only used the term RTI when we were doing a special education unit in project-based instruction, and so I'm not used to looking at it that way.

But I feel like overall with implementing those things and actually using them I do feel prepared with it.

Participant 2: Yes, I agree with Participant 3 and 4 that I definitely think that we brushed over it. Even my professor was like, "Yeah, we're brushing over this. You're going to have to come back to this at some point. The amount of time we have to do it we don't."

So I think that it definitely could be enforced a little bit more so that I had a better understanding that that's what I was learning, because if that had always been referenced to as RTI then I'd be like, "Oh, okay. I get it." But when I came back to it I was like, "I think I heard about this in the special education portion but I'm not exactly sure."

So I think that definitely if we went a little further deep into it it would have been better.

Participant 1: Okay. I agree with all the participants so far. I definitely did not know what it was. Now that we've talked about it out loud I definitely know that we have been doing it and that it's something I do in the classroom and that I've been taught.

But what it is – or like the four components – were completely not even – like I don't remember ever hearing it, so – just if I'm being honest. So every time you're like, "Participant 1," first time I was like, "Oh, yeah. I wanted to be number one."

Participant 5: Yeah, I was able to sit in on an RTI meeting and I remember I was like, "What is an RTI?" So I think an example would have helped me because that's how I work. So being able to see like, "This is what an RTI looks like."

Moderator: Do you have any recommendations for improving field experiences with RTI?

Participant 1: Yeah, just like knowing how she keeps track of like when people are missing so much or when the grades are slipping and they just don't care because they're seniors and they're already – just like how does she keep track of that, how does she hold them accountable, how does she allow them to be adults but still do her job as a teacher?

I mean one thing she said was, "They're seniors. You kind of have to like let them get to the point where they're like kind of panicking." I mean and that really doesn't come until May when they're like, "Oh my gosh, I don't really want to take the final," or "Oh my gosh, I really do want to pass

because I have to have this to graduate." And so they're kind of in this phase of not really caring. So just figuring out how can I not wait until May to wake them up.

Participant 2: In reference to Participant 5 I definitely think I wish I could have been in a meeting of some kind – RTI – I've never had any meetings of that sort, so I think it would have definitely given me a better perspective on how those procedures are done and how they are handling those things with students. So I definitely wish I had more experience with that.

Participant 3: I think with the first part of it – so screening – and then the last part concerning data – I wish I had it modeled a little better and in a more structured format because I think the more structure there is in those types of things the more you're likely to do it consistently and the more effective it's going to be.

So I think that I maybe didn't see that much of it when I came in and so I didn't utilize it myself very much.

Participant 4: Just yeah, seeing a meeting. I mean me personally I've been through them as a kid but it's a little bit different being on the end of the teacher, you know, seeing that meeting, seeing it from that point of view I think would make it a lot easier and a lot more – you're more aware of what you're looking at than you're just in a classroom.

Participant 5: I agree with Participant 3. I was able to sit in on a meeting but then I didn't see my teacher do anything about it, so – and that doesn't mean she didn't but I didn't – it was never verbalized, "This is what I'm doing…"

Participant 1: I mean – I guess my mentor was really great in that I did get to see two ARD meetings: so I did get to see this without fully knowing what it was, which was interesting.

Participant 3: I was just going to say overall I think the course work I took was very thorough and it prepared me very well. And then also I think like Participant 2 said before it's being here, having the actual field experience, has also been extremely eye-opening and valuable. So overall everything has felt like good preparation.

[End of Audio]

Special Education Focus Group
Moderator, Participant 1, Participant 2, Participant 3, Participant 4

Moderator: Tell me about your coursework in screenings and how you feel that it's prepared you to conduct them in field experiences?

Participant 1: I feel like we had adequate experience, especially with the RTI. We had an RTI class where we did it in a practicum experience.

Participant 2: I agree. I think it was very helpful and we learned a lot. I do wish we would've had more, just maybe – in all of our other coursework, just had more things about RTI with more experience and stuff, but I do believe that the two courses involving RTI were very helpful. We had the one class that was all about kind of RTI, so we talked a little bit about screening, and then we had another class with – focused on assessments, and so both of those kind of went hand in hand.

Participant 3: I would like to see – I agree, but I would like to see maybe more of what level one looks like in person, what level two, what level three looks like in person playing out in a classroom, 'cause I think in general we've practiced it in the classroom setting but that's kind of been like a general overview. I'd like to see kind of like broken down, the different levels and what they look like.

Participant 4: I agree. Like we said about – we've only seen in them in like the RTI and special education classes. So I think it'd be nice to see it in – for general ed because I know it's important there, too. And like participant number three said about seeing the different levels of it, 'cause we learned about the different levels of RTI but we were just given a student and then we're to go and see what – where they needed work and then go from there, so we didn't really see what level they were at or –

Moderator: Tell me about your coursework in evidence-based interventions and how prepared you feel or felt to implement them during your field experiences.

Participant 1: I think it's prepared us pretty well. Like I said, I wish we had more experience specifically working with a bunch of different kids throughout the time. Meaning different levels, different age groups, different abilities.

Participant 2: Yeah, all of those. The RTI project that we did, we were provided with a lot of resources on how to find different like content-based measurements to, you know, see where our kids were, so I think we were provided with a lot of resources to help find these screenings and stuff.

Participant 3: I agree. I think for – I know for the literacy or RTI class we had to find evidence-based literacy strategy, so they had to be something that was based on evidence, something that was backed by research and that worked.

Participant 4: I agree. That's what I was actually gonna say is that we had to use a strategy and find CBMs for measuring their progress and do the strategies and stuff like that, so that's where – I was gonna say the exact same thing that she did.

Moderator: Tell me about your coursework in progress monitoring and how prepared you feel or felt to do it during your field experiences.

Participant 1: Yeah. When we worked with the student we would have the CBMs – we had 10 CBMs…

Participant 2: We originally had the first three and then we met the 10.

Participant 1: Right. Okay, so we had the first three and then we would have the 10 sessions where we would evaluate their progress throughout. So I think we had a lot of experience, yeah, with that one kid, seeing where they're going with the measurements.

Participant 2: I agree with that. The assessing the student after every session was very helpful in just seeing the progress that they've made. My only concern is I don't – like doing that in a classroom and doing, you know, tier one or tier two when you had multiple kids, I don't know how that would look 'cause we gave a lot of focus to that one student in monitoring their progress, and so I'm just interested to see how that would work out in a larger setting.

Participant 3: I have the same idea as participant number two, kind of seeing how that would look on a larger scale rather than just one student.

Participant 4: I agree with everyone. Mine was more than 10 sessions just because there were some times that I wasn't – we had to do 10 hours of instruction after the CBMs, so mine was a little more so I was able to graph a little more on our graph for progress monitoring, and also we were taught how to look for if our strategy was working with that student, and if there were three points above the trend line or however – that we might need to change our objective or we might need to change the strategy that we were using. So that was helpful, but like participant number two said, we don't really know how it'd work class – like with a whole class and monitoring every single kids' progress the way we extensively did for that one student.

Moderator: Tell me about your coursework in data-based decision making and how prepared you feel or felt to do it during your field experiences.

Participant 1: Yeah. I feel pretty confident about using it in the field. Like we've all said, you know, I just wish we had more experience actually in the classroom with multiple students, but our teachers have been really great about explaining everything in detail as we go along. It was specific to special education.

Participant 2: Yeah. I – it's mainly been in our special education courses when talking about the progress monitoring and stuff. I mean I think I learned that it was very trial and error. You're not always gonna make the right decision and – I mean like we've all voiced – it being just one student and one instance that we did this, it worked out well for this one student but – I mean I feel pretty equipped. I do feel that there will be instances in the future when I am in a classroom and I'm really struggling to make these decisions just because every kid is so different and having multiple kids will definitely change my – I don't know. I'm not making sense.

[Laughter]

Participant 3: Overall, I do feel well prepared for using –data–in the classroom, data based, I guess, lesson material – in the classroom. Okay. I guess just my thing would be like collecting all that data and the how do I display that, how do I – who would I share that with, how – who can I talk to help me make those decisions once I have all the data, if that makes sense.

Participant 4: I feel prepared… Like we said, we've – I mean I don't know if my student is at that – you know, the different stages of the RTI. I'm not prepared with that as much but knowing that I can go in and I have experience going through the RTI project, it helps me. Like we said, we only have seen this in special education courses, so I don't know how well other people who are in general – like ESL majors know about this very well, and I think it's important for them to know about it. So I do feel prepared, though, with what I learned and I was able to make instructional decisions on where to go from after each session with my students, of where to go from there, but, yeah.

Participant 2: Participant four made a really good point with just those who aren't doing the special education track and those that are just doing the general and the ESL are – I don't think are ever gonna have a project like the RTI, and so I don't – if I wouldn't have had the RTI project I would have never known what it looks like to sit down with a kid, to see where they're at, to progress monitor in any of the – you know, to make these decisions. So I don't – I think it's very important that – like I wish this was in the general classes, too.

Moderator: Tell me about your field experiences with screenings and how prepared do you feel to actually do them in your own classroom?

Participant 1: Okay, cool. So we had this screening class where we had the student go – it went along with the RTI class, where we would give them the Woodcock Reading, The Key Math and two other that I don't remember what they were called. I think –

Group: SIB and SIT.

Participant 1: SIB and SIT. So, yeah, we used those four assessments to see where they were at, and at the end, in our reflection, we gave ideas for how their assessments might change how we would teach them later. So I feel like we've had good experience with screenings and we also work with the CBMs and the RTI project. I think we've had really good classes for field experience.

Those aren't the only two classes that have field experience, but those are the two main ones that it was like a semester-long thing. We also had the CDL class where we would make recommendations for our portfolio student, so we would observe one student and at the end of the semester we would give feedback on how we think we could better plan for that student in the future.

Participant 2: Yeah. Participant number one kind of hit on the three field experience I feel were most beneficial. The two classes that we've been referring to this whole time are the two field works as well and – 'cause I've spent a couple of semesters in other classrooms, like just observing and like doing math tutoring after school, but I don't – I mean I feel like until these two courses involving the assessment and RTI, I'd never really seen what it looks like for – to do screenings or anything. And at the CDL it's really good, but they're just so young that they're not really looking to like take grades and, you know…

Participant 3: I agree with both. I think that in my mind the RTI and the assessment class were the two that prepared me the most and showed me really what screening looks like. The CDL we did make recommendations but I guess it didn't really stick in my mind that this is screening, but it was made clear definitely in the RTI class during the CBMs, so – and I think it is important that, you know, not only Sp. Ed. students know how to screen and what to look for but that all teachers across, you know, every level know what that is and how to do it.

Participant 4: I think for some of us for the class specifically that's the RTI and the assessments where we got out there and we did the assessments on the students to see where they say with the Woodcock Reading and the Key Math, like, we – for some of us, we didn't get to use the same student that we were using for RTI for the assessments, so it did give us an ex – some experience of using another student and assessing them. So once I was

done assessing that student on those four assessments I did have to make recommendations for that student, but I didn't really know them much outside of those – the time I spent with them for the four assessments, so the screening was really important and I think we should all know how to do that and stuff, but, yeah, for the most part, the – yeah.

Moderator: Tell me about your field experiences with evidence-based interventions and how prepared do you feel to actually do them in your own classroom?

[Laughter]

Participant 1: Well, in the field experience we had to use that evidence-based intervention. For me, the evidence-based one that I chose off the bat was what my mentor teacher told me to choose. She said, "This student's struggling in this, you should use this," so I was kind of supplied with it. I didn't have to experiment too much. So – but I heard from other people in my classes that it was a little bit more of a struggle to figure out what intervention would work.

Participant 2: Yeah. My mentor teacher told me kind of what the student struggled with but didn't really give me much past that, and so I think…the class we took here was helpful in having a professor who we could go and say, "Hey, my student's struggling with this, this is kind of what I saw doing these CBMs. Can you help me pick an intervention?" And because we would spend every day learning about new interventions it was pretty simple to make a decision on the intervention, but while in the field I never really saw my mentor teacher or anything choose one or direct me in any direction.

Participant 3: I had kind of the same experience. I had a kindergartener and loved the mentor teacher, had a great experience with him, but he – I mean he told me kind of where the student was at but didn't really display strategies or instruction that he thought would be helpful. So I think using the evidence-based strategies that were in the class and having a variety of those and finding one that kind of matched up with what that – I thought that student needed based on the screening and based on the measurements was helpful, and, yeah, it turned out to – I used K-PALS and it worked really well.

Participant 4: I had the exact same school and mentor teacher as participant number three, so exactly what she said, so…

Moderator: Tell me about your field experiences with progress monitoring and how prepared do you feel to do them in your own classroom?

Participant 1: Yeah. We just monitored them as we went along. Yeah, I didn't really have to change mine. My student was progressing but he was progressing pretty much at the rate that I thought he would. Yeah.

Participant 2: My student, he progressed. There'd be – I mean because we – I met with him 10 or 11 times, there were a couple days where I noticed he just wasn't all there and didn't want to, you know, try too hard, so that was an interesting component that I never thought about with doing progress monitoring. I kind of just though, well, my student's gonna be on all the time and I'm gonna know exactly where he's at, and so I would always have to take that into consideration when thinking about when using progress monitoring to make those decisions, just, you know, what did he tell me? Like did he tell me that he hadn't slept much or he had a busy weekend and it's Monday, and I would just have to think about that when monitoring his progress.

Participant 3: Yeah. I think it's an overall kind of big idea on – 'cause, you know, it changes day to day, the progress of kind of just where they're at day to day, and so you have to take that into consideration, like participant number two said.

Participant 4: This is the field experience and progress monitoring? I never saw my mentor teacher tracking data, using it, doing that. I never saw him actually recording anything. I know that he would tell me sometimes, "Hey, I know your student is just had – he has a new baby brother and he – they haven't been spending as much time with him reading at night than they had normally," and so I mean I know that he kept that in mind and he would tell me, but with the progress monitoring I think, like we've been saying, it's just keeping up with how the – like on a graph, how it's going and knowing when you need to change your instruction or anything like that.

Moderator: Tell me about your field experiences with data-based decision-making and how prepared do you feel to do them in your own classroom?

Participant 1: Kind of the same. Yeah. We would – I mean like we said, we did the CBMs, we continually monitored the student. The mentor teacher didn't really do anything to adjust anything I was doing. She was just happy that the student was progressing at all. It was evident, she told me, that he was progressing during class time, but…

Participant 2: I would sometimes go to my mentor teacher and just say, "Hey, this is what I've seen. I'm gonna do this. Do you think that's gonna be effective?" And my student was in the third grade, so I used the strategy FAST and *[laughs]* would really kind of offer him some choices in making these decisions. Like I knew that no matter what component of FAST he wanted

to do it would benefit him, so I allowed him to be a part of that decision-making.

Participant 3: Data – okay. So to me I guess that means after I would do some of the sessions and receive that data on where the student was progressing to, making decisions on where I wanted to be –adjusting instruction and changing – moving them up or down a level. Right. So based off of that, so after a few sessions or after those CBMs and I have that data then knowing where to go from there and basing instruction, I guess, difficulty level or what we wanted to do based on that data that I collected previously.

Participant 1: We worked with the students. We'd work with them – essentially, like we would pull them out of class so we weren't actually observing the teacher in their general classroom.

Participant 4: I was just gonna say that during the RTI sessions that was basically my only field experience, where I was able to make the decision to – for instruction and change of introduction, and so there was one point where my student was progressing a lot faster than I thought they would and so I had to go in and change my objective and put an intervention line in, and so I did experience that, but other than that…

Moderator: Are there any recommendations you have to improve coursework or filed experiences?

Participant 1: I would say, as we've said, to incorporate it more into the general education courses. They talk about, you know, making accommodations and modifications, which are really important, but they don't talk so much about in the general courses, about individualizing it completely and taking into account how the progress is going. That's more specific to special education courses at UNT. I would say we had really good field experience classes. I would like to – if I could go back, I would like to experience it with more diff – working with different kids than – most of our classes we focused just on one kid, in the CDL we focused on one kid and the RTI we focused on one child and the assessment we focused on one child.

There was only one other class where we just went to the classroom, and I'm pretty sure we just sat there and observed, but we didn't specific work with all the students. We were just observing for the most part. So I think that course could be modified to where we weren't just observing, we were walking around, helping, and learning how the teacher did these things firsthand.

Participant 2: Well, the courses that we've been talking about I think were very beneficial, just both being in the classroom with our two professors, learning about literacy strategies and assessments and then with that same class going out into the field and being with students. I definitely agree with participant number one in saying that the general education classes really need something like the RTI and just getting experience with progress monitoring and screening and CBMs and everything that we had experience with. I do wish that we had more than the two courses that we had because we took – I think all of us took them in the same semester, and so you had – you experienced that one semester out of the eight or whatever that were here, and although I think we're all very thankful for it we would like to see more.

Participant 3: I don't think I would've changed any of the coursework, field experiences, they've been beneficial, but I guess coming into college – and I told you earlier I'd like to work more with the life skills – and so I'd like to work – would've liked to work more with the special needs children and see what that really looks like, you know, working in a special needs class or like just a special needs class, you know, and that's something I've thought about over the years. It's like I'm not really getting that experience, that really like you're in a special needs class, you're working with a student who really needs life skills or something a little more intense, I guess. So that would be mine.

Participant 4: I really enjoyed doing the RTI and those classes where we were able to go in and do the assessments and stuff and see it firsthand, but as long as – as far as the RTI I think those courses were very, very, very well taught and I enjoyed taking them. I wish there was more – kind of more we could do with it. I think general ed. – I've heard like some of the professors just in some of our general ed. classes say, "Hey, RTI," and mention it, and a lot of them probably don't even know what that means because they've never even had to implement it. So…

[Laughter]

[End of Audio]

Open Response Questions		
Is there anything related to RTI that you wish had been included or more deeply covered in your university coursework?	Is there anything related to RTI that you wish had been included or more deeply covered in your field experiences?	Please provide details about the coursework and field experiences you believe strengthened your ability to implement the components of RTI.
NA	NA	Special education course and ESL courses - actually watching my mentor teacher go through the RTI process
More detailed examples and practice	Actually using and creating RTI's and seeing how beneficial they are	I vaguely remember learning about it but it was not a strong focus
How to implement it, we just learned what it was.	More experience.	Attending rti meetings for students during field experience.
Examples of videos of the RTI process	Decision making, screening	Meetings, documentation, class of 40% RTI tier iii
Examples of actual students		RTI meetings
No	No	NA
The RTI steps	Getting to watch RTI meetings	Mentor teacher explaining the process
NA	NA	NA
NA	NA	NA

No	No. It has been covered pretty well throughout all of my classes.	Taking EDRE 4850, which is an assessment course
The procedure as a whole.	N/a	Being directly involved in ARDs and RTI meetings
Examples of students who went through RTI-analyzing data and guided on how to make decisions	Explicitly taught what tier a student was at, and how to help that student	Looking at benchmark test data; SST meetings
Parent contact	Overview of steps taken at the district level	Idea of how it should be or what the outcome could be
I wished I had learned typical signs to look for in students that demonstrated they need further intervention.	I wish that I had been able to be more involved with the decision making process.	We discussed the definition of RTI and briefly what it looks like in the classroom.
		Hands on projects w/ actual students
	Being able to look at a RTI "notebook" would be helpful	RTI modules -RTI pictorial representation
N/A	N/A	Early childhood courses provided a wealth of info about RTI
		Being able to attend RTI meetings and being more hands-on with the process.
Everything	Exposure to more rti students	

NA	NA	NA
More than a small definition would be nice		NA
Data	Experiences period	We just covered the basics
Just covering more RTI related work in general.		
All of it.	The process	Mentor.
I wish I knew more ways to implement RTI for different grade levels.	None	Actually watching my mentor teacher implement rti has helped a lot
Everything related to RTI	Observing several teachers would be helpful	My mentor teacher was helpful
Data-based	Data-based	
Rti was hardly covered at all.	A full overview & practice with rti	Being in the classroom and observing
All information - teachers assume we learned before		Just learned about RTI - not how to implement

Just a more deep instruction		
Not really, it's not my intended field.	I WISH TEACHERS ADDRESSED THE ISSUE MORE FREQUENTLY.	To be entirely honest we've only had discussion assignments on this topic.
More in-depth information about RTI	NA	NA
No	No	It has been mentioned & discussed in classes. I don't have much field experience with it.
I wish more courses would've required rti practice.	Move ideas for content based measurement.	Meeting with a student regularly to monitor his progress and help make decisions for content.
All of it. I feel as though I should at least know a little .	Hopefully everything. Clearly this is important and I am completely unfamiliar.	Little to no training and I have two courses left before beginning student teaching.
Interventions and how to form plans off of the data.	NA	I learned so much during my field experiences.
Implementing data-based interventions for the different tiers.		My field experiences gave me more meaningful experiences pertaining to RTI.
Data based interventions	Different types of interventions	Looking at IEP, making decisions based off progress
		Looking at individual student data and speaking with a team to decide next course of action.

NA	NA	NA
None	None	Instruction regarding each RTI tier and how to assist students on each level effectively.
I wish screening and progress monitoring had been covered more deeply.	I wish screening had been covered more deeply in my field experience.	
Practice	More practice	Looking at data
More hands-on experience in working with materials/strategies.	No - I had mentor teachers who covered these topics.	Student teaching. Independent research.
NA	NA	NA
Screening and progress monitoring.	Data-based decision making and screening.	Pulling small groups and working with strategy groups.
Screening & interventions in an actual classroom setting & not just what it is.	I don't feel like I did any of it besides looking at data from the students but doing nothing with it.	Coursework at least taught me about it, but there was no room for me to implement it in the classroom.
Sample of the process from tier 1-3...data & samples of what that looks like.	What academic expectations at each level look like	None. All done at other university in a RTI class.

How to apply RTI in the classroom.	The intervention part of RTI.	The coursework taught me about RTI but the field experiences taught me all of RTI and how to implement.
It would have been very important to have had exposure to RTI in university since I received more in the field.	I wish I had been placed in a classroom using or even needing this type of instruction.	None.
I wish we had more practice analyzing different data representations used by the different districts.	I wish my mentor teacher had walked through all of her instructional decisions based on her RTI data.	My introduction to elementary education with dr. Morrison was most helpful with RTI training.
N/A	N/A	N/A
N/A	N/A	N/A
The course that teaches about RTI should be more thorough b/c it is so big in the grade level classroom.		Don't remember the course number but it was an EDRE 3000 level class.
Specifically, how to implement each part.		
		RTI plan in EDSP courses plus training field experiences in multiple courses.
Screening process		RTI project, observation, practicing analyzing different RTI's in class.
All of its components	More experience with the steps	My mentor was very helpful

		Working with students
No	Most students with RTI were with one specific teacher, not mine.	Reading about RTI reading case studies.
Schools should provide us w/access to the students. Having to find our own field work students is difficult.	Definitely progress monitoring.	Working with actual student with learning disabilities.
The screening for RTI because I don't really know what that is.		The early childhood class had a lot of emphasis on RTI then the reading assessment class teachers how to implement based on data.
Frequent individual practice	NA	Direct observation and limited practice with students
Scenarios and hands-on experience	All info pertaining	Not very helpful
N/A	N/A	N/A
Ways to implement each step -what interventions would be best for each content	More experience going through the entire process with an individual student	I worked with resource students in field work
Literally all. There is no real world applications using data relative to RTI.	A resource book to pull intervention strategies from	We went through RTI implementation and monitoring in plc groups and walked through it w/ mentor
Same as #27	*practical intervention methods-support with implementation	*Sped courses *conversation with inclusive teachers on campus *faculty meetings

More of everything, more practice.	Had great experiences	Being w/ my mentor
	Attending more meetings w/ professionals to know what to expect	Professional development on RTI at start of school year in __ ISD
Not particularly	Actually implementing RTI, or at least more frequently	
No	No	Working with test scores and other formative assessments
More on how each student would be for each level		Field experiences helped a lot. UNT coursework did not help. Field experiences helped learn the process of RTI better and for each tier.
Yes, I would like it to be taught. I felt like it was something that was just mentioned.	Same as above	My mentor teacher has shown me much more in regards to RTI than my UNT classes.
I think RTI is good but not done well at my school	I wish the school gave first hand examples	NA
More time practicing it.	More examples.	I never felt confident in the components of RTI.
Realistic scenarios/materials		Textbook was the most helpful resources I used. Would like this improved on.
See different levels and progress during the school year.	More real world experiences in class.	Being able to attend more meetings & interventions while student teaching.

We did not discuss it much		Student teaching
Processing method.	Monitoring.	Watching the RTI process.
Implementing evidence-based intervention	Screening	Actually going into more depth about the subject in coursework.
How to implement intervention vs regular instruction	Same as above	Making data-based decisions for whole-class instruction during PDS
		Attend RTI sessions & ARD meetings with mentor teacher
More real world practice	Each of the tiers and real world examples and situations. Practice with them.	A few assignments and observing my mentor.
How to coach kids. Comp & fluency	Ways to monitor w/o data	I do RTI 3 days a week w/ students!
I think we need a whole RTI class	Seeing and practicing components	Working directly with students
NO	NO	N/A
More overall training.		Monitoring students' progress on quizzes and test and even behavior.

Data-based decisions	I wish all of it was included more	Project-based learning course
Yes I wish I had more opportunities to implement RTI in my instruction	Yes I wish I had more experience implementing RTI in my classroom	I had some experience with monitoring tools and evidence based intervention
N/A	N/A	N/A
Anything more than i received - which is none.		
It was not a part of my university coursework.		
Examples of how to implement		
How to use data	I would have liked to attend trainings and meetings	
We simply went over the steps. I would have liked to be given scenarios in which we could have practiced.	N/A	Course work given allowed us to see the steps of RTI.
It was never clearly explained. We learned pieces, but it wasn't labelled as RTI, it was just part of the education process.	No, it was covered w/ examples and real-world applications in the field experiences.	Lots of tech resources that track & show data trends for tests. Actually working w/ kids & teachers to understand what is needed to work.
I wish that the staff would explain what RTI is and how it is used in a classroom		

RTI was never fully explained, much less given time in class to learn how to implement it.		
The concept was barely touched on if at all	The concept	I can't recall any.
Actual training of RTI	How to use RTI in a dance class	Had none
I don't know what it is. I don't recall ever discussing it in my course as a student. We haven't talked about it in my school district.	I'm not sure	Most of the experience I got that seemed related to RTI came up because of campus policies in the field. My school devised intervention p
More hands on experiences doing RTI activities.	A course on RTI would have been helpful.	Working directly with students helped increase my ability and confidence.
Anything about RTI. in secondary classes it is hardly discussed.	seeing the process	Kappa Delta Pi is the only information I've really gotten extra of from UNT. We had an RTI professional development event.
More practice screening and learning about screeners	Opportunities to see mentors using RTI	Actually practicing the components.
		Assessment classes taught me a lot about RTI components and how to do them in a classroom
I was very well trained in my course work.	I had a lot of field experience with RTI.	EDSP 4320 and 4330 prepared me very well.
N/A	N/A	Assessment classes were very helpful. My mentor teachers were very helpful.

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