

Effects of Strategically Designed Professional Development Experiences  
on Teacher Perceptions of Response to Interventions  
Tier I Instructional Strategies

By

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### **Abstract**

The purpose of this research study was to determine the effects of strategically designed professional development experiences on teacher perceptions of use of Tier I Response to Intervention instructional strategies. This study was motivated by recent changes in course offerings in a general education Language Arts department at a high school. Staff members from the English Language Arts department along with the Special Education department collaborated to address how to effectively meet the needs of a more heterogeneous mix of students in their general education classrooms. Pre and post surveys were used to collect quantitative data to strategically design, administer, and evaluate the effects professional development experiences to general and special education teachers. Based on the results of these baseline surveys and conversations with both special and general education teachers, the Tier I instructional strategies of co-teaching in the inclusionary setting and differentiation were identified as essential strategies to improve to meet the needs of all students. Following the professional development experiences, the post survey was used to analyze and evaluate the effects the professional development experiences had on the teachers' perceptions of both the priority of and confidence in use of the identified Response to Intervention Tier I instruction strategies.

*Keywords: professional development, co-teaching, differentiation, response to intervention, RTI, secondary education, Tier I interventions.*

The Kinni Falls High School (pseudonym), like many secondary schools, lacks a clearly designed Response to Intervention (RTI) framework in the areas of reading and literacy. RTI is a multi-leveled approach to instruction and intervention implemented to ensure success for all students (Reed, Wexler & Vaughn, 2012). One of the reasons for the absence of an RTI framework at the Kinni Falls High School is a lack of research relating to effective implementation strategies of universal screeners, interventions and structures at the secondary level (Douglas, Fisher & Frey 2011; Sansosti, Noltemeyer & Goss 2010). Also in question is how to address specific constraints that are unique to the high school level such as scheduling and content area graduation requirements (Fisher & Frey, 2011).

Historically, much of the research relating to reading and literacy screeners, interventions, progress monitoring strategies, and effective RTI procedures has focused on the primary grades (Fisher & Frey, 2011; Reed, Wexler & Vaughn, 2012). After a certain point in a student's matriculation through upper middle school, explicit reading instruction on basic reading skills such as decoding, phonemic awareness, reading fluency ends. Focus is gradually switched to text analysis with the assumption that explicit instruction is no longer needed (Reed, Wexler, & Vaughn, 2012). Due to these misconceptions that students in secondary school do not need explicit reading instruction, and a perceived lack of research relating to secondary level reading instruction, educational leaders as well as teachers seem unsure of how to proceed effectively with implementing a RTI process for reading and literacy.

The intent of this study was to investigate the effects of strategically designed professional development experiences focused on the Tier I Instructional strategies of co-teaching and differentiation. RTI generally includes three tiers of instruction and intervention

with Tier I consisting of curriculum material, instructional strategies and interventions provided to all students within in the general education setting. Based on a student's needs, identified through universal screeners and regular progress monitoring, students move from less intense instruction and intervention to more intense or modified instruction and interventions to meet their behavior or academic needs. Under the RTI framework, Tier II and III interventions consist of progressively more intense instructional intervention strategies, with students who do not demonstrate adequate response to provided interventions being referred for a special education evaluation. Tier I interventions are provided to students who also participate in the more inclusive Tier I instruction, but have demonstrated through regular progress monitoring that they require supplemental instruction to improve academic deficits that are present. It is typically delivered in small groups with the goal of allowing the identified students to make enough gains to achieve a level of academic progress similar to their peers. Tier III interventions are more intensive and prolonged than those provide in Tier II. This instruction is provided either individually or in smaller groups than Tier II interventions.

As a special education teacher, many of my students with various disabilities receive a majority of their instruction in the general education setting. It is essential to the success of these students as well as the general education students that effective Tier I interventions be provided within the general education setting. I work closely with the general education teachers in the Language Arts department to aide in the providing adequate instruction to meet the needs of the diverse learners in our school. Together as a team we identified two areas, co-teaching and differentiation, that we would like to expand our knowledge.

### **Literature Review**

In order to answer my research questions I conducted a review of literature in four areas: Response to Interventions and the rationale for use at the secondary level, key components of effective implementation of RTI at the secondary level, effective RTI Tier I interventions, and effective professional development models. The review of literature in these four areas helped me to develop my knowledge base and to develop and design my study.

#### **Response to Intervention and Rationale for Use at the Secondary Level**

Following the 2004 reauthorization of the Individuals with Disabilities Education Act (IDEA), states were no longer legally required to use the severe discrepancy model or otherwise known as the IQ-discrepancy model to meet eligibility requirements for a disability under the category of Specific Learning Disability (SLD). Instead the reauthorization of the law allows individual states and even districts to “use a process that determines if a child responds to scientific, researched-based interventions as a part of its identification process” (20 U.S.C. §1414(a)(6)). RTI is “a framework for providing instruction to student with learning and behavior difficulties that is based on universal screening, assessment, and ongoing supplemental interventions, which increase in intensity to meet students’ specific needs” (Reed, Wexler, & Vaughn, 2012, p.15). Additionally, “RTI is a school wide service delivery system that is multi-tiered, including all students initially in general education and providing increasingly intensive interventions for students who are not making adequate progress, potentially leading to special education placement” (Reed, Wexler, & Vaughn, 2012, p.15).

This piece of legislation opened the door to the use of RTI in determining eligibility for special education services under the category of SLD which further fueled the fire of the RTI

movement (Fisher & Frey, 2011; Fuchs, Fuchs & Compton, 2012; Hughes & Dexter, 2011). RTI was designed to address several identified issues that plagued the IQ-discrepancy model. First, the IQ-discrepancy model required learners to essentially “wait to fail” before additional supports and services were put in place through special education academic and behavior interventions. General education teachers were not provided with the tools and resources needed to address student needs prior to failure. A second shortcoming of the IQ-discrepancy model is the over identification of minorities and low-income students as having learning disabilities due to lack of adequate instruction resulting in special education referrals. RTI addresses both of these issues through its use of universal screeners to identify whether adequate instruction is in fact being provided to meet the needs of all students and through its quality core curriculum, research-based instructional strategies and increasing interventions based on assessment and progress monitoring data.

With the option to use RTI as a component to identify students with SLD, states shuffled and shifted their individual laws in a variety of ways to incorporate this option into their overall procedures of disability identification. According to Zirkel’s report published in 2011, forty-four states explicitly required or recommended through law or guidelines that key components of RTI be used in the Specific Learning Disability identification process (Zirkel, 2011). The Wisconsin State Superintendent defined RTI procedures at the state level as, “a process for achieving higher levels of academic and behavioral success for all students. [...] Further, RTI systems use a multi-level system of support to identify and respond to student need” (WI DPI, 2010, p. 7).

In addition to being a possible option for states to determine eligibility requirements for a disability under the category of a Specific Learning Disability, RTI has been supported through

continued research as current best practice to ensure that all students are receiving adequate instruction within the general education setting. Although much of the research relating to reading and literacy screeners, interventions and progress monitoring strategies, and effective procedures has focused on the primary grades, a case study completed by Fisher and Frey (2011) examined the overall systematic implementation of an RTI framework at the high school level. In their study, they found that five themes emerged correlating with successful of implementation of RTI at the secondary level.

The first theme identified was a focus on *quality core instruction* that included purpose and modeling, guided instruction, productive group work, and independent learning tasks all based on the belief that all students should have the opportunity to experience academic success through high quality research-based instructional practices (Fisher & Frey, 2011). The second theme related to using *course competencies* to monitor student progress. This method of progress monitoring, and essentially grading student performance, was initiated by the math teachers and was adopted across the other content areas throughout the two-year study. The use of content competencies as a measure of student progress provided teachers and specialists with valuable information about skill development guiding additional interventions as needed. The final three themes that emerged were: *scheduled interventions* to supplement, not supplant, core instruction; *dedicating resources* to support intervention efforts; and the adoption of a *school-wide approach to RTI* to maximize intervention impact. As a more effective system of progress monitoring evolved through the use of content competencies, the teachers in the school were able to better provide Tier 1 and 2 interventions within the general education setting utilizing differentiated instruction and co-teaching environments to target skill deficits with more

individualized and intensive instruction. The school devoted resources to support interventions through the hiring of an intervention specialist who supervised the referrals of students to interventions both within the school day and afterwards. Towards the end of the study, both the intervention specialist as well as almost every general education teacher was responsible for providing individualized interventions to at least one student. As a result, the school in the study noted greater academic success in the form of reducing the number of students achieving a failing grade from 55% to 12% at the conclusion of the two-year study. The participants in the study also noted that ongoing professional development was essential to the success of the implementation of RTI at the secondary level (Fisher & Frey, 2011).

### **Key Components of Effective Implementation of RTI at the Secondary Level**

Despite differences between the effective implementation of RTI at the secondary level as compared to the primary grades, there are several key components to its effective implementation. According to current research in the field, the key components to effectively implementing a RTI framework are: high quality scientifically and/or research-based instructional strategies used in the general education setting for all students, universal screening for academic and behavior problems for all students, multiple tiers of progressively more intense instruction/intervention based on student progress, and decision making processes based on fidelity and integrity of the process (Brozo, 2009; Hughes & Dexter, 2011; Sansosti, Telzrow, & Noltemeyer, 2010; Zirkel, 2011; Isbell & Szabo, 2014).

Isbell and Szabo (2014) examined the concerns of ten secondary teachers relating to the implementation of RTI after four years of implementation. According to the study results, teachers expressed feelings of success in the areas of awareness of RTI, tutorials provided to

students outside of the general class time to support student needs, providing adequate questioning during class time to assess student understanding of concepts taught, and adequate repetition of concepts taught to allow for mastery. Additionally, teachers indicated patterns of concern in the areas of adequate collaboration between teachers, parents, specialists and administrators, a lack of time to accomplish all the responsibilities related to teaching and successfully implementing RTI, clearly understanding the roles of the teacher, specialists and administrators in the RTI framework, how to document and where documentation should be kept, and how to individualize learning so that each student's needs are met. As the authors of this research study indicated in their summary of findings, "results of this study support the importance of administrators' communicating purposefully about this change, planning for appropriate training, developing collaboration through learning communities, and providing resources in order for teachers to feel comfortable and competent in implementing RTI" (Isbell & Szabo, 2014, p. 20).

Sansosti, Telzrow, & Noltemeyer (2010) conducted a focus group of secondary high school psychologists' perceptions of barriers and facilitators of RTI implementation in secondary settings. They analyzed participants' perceptions at two levels: the micro level, which included components for RTI success, as well as the macro level, which included RTI within a systems framework. They analyzed data from the focus groups and four themes were identified: systems characteristics, system structures, evidence-based practices, and professional development needs and delivery systems.

Under the theme of system characteristics, it was noted that secondary schools are unique from elementary schools in that they are, "highly departmentalized, such that teaching of specific

content areas works against successful implementation of educational innovations such as RTI” (Sansosti, Telzrow, & Noltemeyer, 2010, p. 9). At the secondary level, students are provided instruction from a multiple teachers across these content areas making the effective collaboration needed to implement a RTI system more challenging. The difficulty implementing RTI at the secondary level is compounded due to the fact that many school psychologists report secondary education teachers as reluctant to implement interventions in their instructional settings. Most commonly this is because the secondary teachers view the secondary students more as adults and therefore expect them to be more responsible for themselves. These false expectations explain the lack of interventions and modifications for students to at the secondary level.

Related to the theme of professional development, researchers Sansosti, Telzrow, & Noltemeyer (2010) found that professional development for teachers and other stakeholders was perceived as necessary to provide both adequate instruction, interventions, and to ensure mechanisms for establishing and scaling a system of RTI at the secondary level was essential. The secondary level school psychologists that participated in the research study concluded, “most educators at the secondary level are unfamiliar with the concept of RTI and its core features (i.e., collaborative problem-solving teams, tiered levels of intervention supports), and that early professional development should provide an orientation to these topics” (Sansosti, Telzrow, & Noltemeyer, 2010, p. 13).

A research synthesis report conducted by Hughes and Dexter (2010), examined the efficacy of RTI as a whole program as opposed to the effectiveness of its isolated parts. In this summary of research, thirteen published field studies were examined. Field studies included at least two tiers of instruction or interventions and including quantifiable measures of student

academic or behavior outcomes. The outcomes of the summary indicated that even though overall academic gains were made, the impact on special education referrals was only mildly decreased. Additionally, the research summary suggested several factors needed to make RTI scalable, “These factors, constant in most of the studies, included: extensive and ongoing professional development, administrative support, teacher buy-in, and adequate meeting time for coordination” (Hughes & Dexter, 2010, p. 10).

A research study conducted by Vaughn et al. (2010) sought to, “implement and evaluate the outcomes of a comprehensive research-provided intervention with older students with reading difficulties” (Vaughn et al. 2010, p. 5). They designed and implemented an extensive, yearlong study they compared the effectiveness of Tier 1 and Tier 2 research-provided interventions with older students who struggled with reading were provided with some interesting yet unexpected results. They found that students in both groups, Tier 1 and Tier 2, made gains over the course of the year, with the students in the treatment group making gains that were slightly greater on several measures including word attack, spelling, comprehension and phonemic decoding skills (Vaughn et al. 2010). Upon further examining the reasoning for the smaller than expected gains of the treatment groups, the authors noted that the professional development that was provided to all participating teachers may have attributed to this universal presentation of professional development to those providing both Tier 1 and Tier 2 interventions. This study supports the importance of providing adequate professional development as well as researched-based instructional strategies to both Tier 1 and Tier 2 teachers in order to fully see the benefits within an RTI model being implemented at the secondary level.

### **Effective RTI Tier I Interventions**

As the research on key components of RTI implementation indicates, what happens in the general education classroom is essential to the success of the individual student and to the effectiveness of the RTI process. Under the RTI framework, Tier 1 instruction, or classroom-level instruction is the responsibility of the content area teachers. Content areas teachers need to focus on instructing students on ways to become readers in their specific disciplines to make an impact on students' literacy achievement (Lenski, 2012). Without effective Tier 1 instructional strategies and interventions, the rest of the RTI framework is difficult to implement. Additionally, without a scientifically based core curriculum in place, it is not possible to determine if lack of learning is the cause of inadequate instruction or a true learning disability (Hughes & Dexter, 2011). Two of the key instructional strategies that rose to the surface during this review of literature were differentiation of material and instruction and use of co-teaching in the inclusion setting. These two instructional strategies go hand and hand and together create a synergetic impact within the classroom for the students who experience them effectively being used.

**Differentiation.** As Brozo (2010) illustrates in his commentary, “preventative action in an RTI program should occur primarily in the general education classroom within the so-called Tier I” (p. 280). With a wide range of needs often present within the general education setting, In order for an RTI framework to function as a preventative measure, as opposed to the “wait to fail” process implemented under the discrepancy model effective Tier I interventions must be provided in the general education setting to ensure academic success for all students, (Brozo, 2010). According to Wisconsin State Superintendent Tony Ivers, “All students should receive high quality, culturally responsive core academic and behavioral instruction that is differentiated

for student need and aligned with the Common Core State Standards...” (WI DPI, 2010, p. 9). Tomlinson (2001) defines differentiation at its most basic level as, “shaking up what goes on in the classroom so that students have multiple options for taking in information, making sense of ideas, and expressing what they learn” (p. 1). Lenski provides a rationale for the need for differentiated instruction as a Tier 1 instructional strategy due to the fact that, “one of the barriers to increasing opportunities to read is that most secondary classrooms contain students who range in reading levels, some as low as primary grades” (Lenski, 2012, p. 279).

Hobson’s 2008 study analyzed the differentiation strategies used by middle school teachers. In her study, Hobson built off of the findings of her previous work. The purpose was to identify differentiation strategies, based on both teachers’ ratings of use as well as through classroom observations. These results were compared to evaluate any trends. The results of the study showed that the teachers’ ratings matched the observations. According to both the rating scales and the observations, the teachers used more differentiation strategies relating to content or process than they did product. Differentiation involves the modification of the process of instruction, the product used to demonstrate student learning and the content itself based on the individual learning needs of the students. When evaluating trends, Hobson actually found a negative correlation with the frequency of use of differentiation strategies and the number of years of teaching experience, workshops and college course taken on differentiation (Hobson, 2008).

Santangelo and Tomlinson (2012) conducted a study that sought to examine the beliefs and practices of teacher educators at the university level. The intent of this study was to explore to what degree teacher educators rated their perceptions of importance of use of varying

differentiation strategies based on Tomlinson's model. The rationale behind this study was to determine to what degree teacher educators felt prepared to utilize and model differentiation strategies in their own teacher educator courses. Overall, the researchers found that some components of differentiation were being modeled more so than others. For example, the awareness of student readiness, and the importance of creating a positive learning environment by varying process, content and product, were all reported to be valued and practiced. On the other hand, there were four components that were rated as being less valued. Of those components, learner profiles were rated as having the least value along with providing more challenging experiences for those that were ready for them, use of continual and varied assessments, and the ability to use flexible groupings as an instructional strategy (Santangelo & Tomlinson, (2012).

The authors of this study posed the question that if teacher educators didn't feel prepared to use differentiation strategies with their students at the university level, how then would those students successfully move on to utilize differentiation strategies within the primary and secondary level educational environments? The results indicate two important findings: if we are to expect teachers to effectively use differentiation strategies 1) teacher educators need to improve their consistent use of these strategies so as to model them for teacher candidates and 2) additional, on-going professional development beyond the instruction provided at the university level is needed.

**Co-teaching.** Brown, Howerter and Morgan (2013) define co-teaching as general and special education teachers planning, delivering, and assessing instruction together in a single classroom. In their review of six meta-analysis or synthesis studies, Solis, Vaughn and McCulley

(2012) analyzed the collaborative models of instruction of inclusion and co-teaching.

Co-teaching, as previously defined, is an instructional strategy that has been increasingly used to ensure that the needs of diverse learners, including learners with identified learning disabilities, are able to experience academic success in the general education setting. Co-teaching is an instructional strategy that, when implemented effectively, has a positive impact on the learning environment for all students (Brown, Howerter, & Morgan, 2013; Scruggs, Mastropieri, & McDuffie, 2007). Additionally, co-teaching teachers reported, “that they had benefited professionally from co-teaching experiences” (Scruggs, Mastropieri, & McDuffie, 2007, p. 401). The benefits were reported to be mutually experienced between special education and general education teachers. General education teachers reported that while co-teaching they grew professionally in their skills and abilities to provide effective classroom managements and curriculum adaptations while the special education teachers reported growth in their content area knowledge (Scruggs, Mastropieri, & McDuffie, 2007).

In order to achieve an effective co-teaching model, essential tools and strategies must be developed and mastered. The six most commonly cited are: 1) effective communication and a positive report between co-teachers, 2) time for co-planning and preparation, 3) shared delivery of instructional and assessment, 4) a method for conflict resolution when it occurs, 5) administrative support and leadership, and 6) training in co-teaching strategies (Brown, Howerter, & Morgan, 2013; Keefe, & Moore, 2004; Scruggs, Mastropieri, & McDuffie, 2007; Solis, Vaughn, Swanson, & Mcculley, 2012). In their research study, Keefe and Moore (2004) examined the challenges and successes of co-teaching at the secondary level through interviews with co-teachers and a thematic analysis of their responses. Their findings indicated that the

success of the co-teaching experience for both teachers and students was heavily dependent “on the relationship which they had with their co-teaching partner independent of their philosophy toward inclusive education or even the outcomes for students” (Keefer & Moore, 2004, p. 86).

Research also indicates the level of success within a co-teaching model is dependent on the roles each teacher takes within the co-teaching model. The most common model of co-teaching observed and reported within the research findings is referred to as “one teach, one assist” (Brown, Howerter, & Morgan, 2013; Scruggs, Mastropieri, & McDuffie, 2007). Other models of co-teaching include; one teach, one observe where one teacher delivers content while the other observes and collects data, station teaching in which students participate in two to three groups and the co-teachers supervise and instruct at different “stations” with the groups rotating between teachers, parallel teaching where each co-teacher provides instruction to two or more heterogeneous groups, alternative teaching where one teacher provides instruction to the majority of the students in a large group and then the co-teacher delivers instruction in the form of reteaching, preteaching, or enrichment to a smaller group at a different time as the large group, and finally team teaching where both co-teachers work together to provide content and instruction to the whole heterogeneous group (Brown, Howerter, & Morgan, 2013).

### **Effective Professional Development models**

Effective training through professional development is essential to the success of RTI programs. Isbell and Szabo (2014) stated, “In order to understand and address concerns about an innovations such as RTI, teachers and administrators must engage in purposeful professional communications” (Isbell & Szabo, 2014, p. 20). This can be done through various strategies and models. At a time when many educational professionals are finding themselves overwhelmed by

the pressure and number of initiatives to address, the need for thoughtful, strategically designed training and professional development opportunities is essential to ensure the greatest impact within the classroom. Professional development for educators can be improved to ensure that effective professional development is provided to meet the needs of all teachers in four ways; fixing the supply, demand, information, and efficiency (Hill, 2009).

According to DeMonte (2013), the shortcomings of teacher professional development are well documented. Often professional development is unsuccessful because it is disconnected from the practice of teaching and learning and is too generic to be effectively applied to specific curriculum areas or identified areas of need within the instruction. Additionally, professional development is often presented as a one workshop by an individual unrelated to the school or district without adequate time to build on the knowledge presented during the professional development experience. There is an endless supply of professional development opportunities, yet those opportunities are often lacking in consistent quality. Hill (2009) recommends developing a set of standards for continuing education, otherwise known as professional development, similar to that used in the field of medicine. Additionally, high-quality professional development opportunities comprise the following: “aligns with school goals, state and district standards and assessments, and other professional-learning activities, focuses on core content and modeling of teaching strategies for the content, includes opportunities for active learning of new teaching strategies, provides the chance for teachers to collaborate, and includes follow-up and continuous feedback” (DeMonte, 2013, p. 6).

In turn, once the issue of the quality of the supply of professional development has been addressed so that educators can confidently commit their scarce time to professional

development, Hill (2009) recommends that policy makers provide incentives to encourage educators to engage in the most research-based and meaningful professional development experiences to ensure improved teaching and learning in the classroom occurs. As far as improving the information, Hill suggests conducting small-scale, but rigorous studies that measure the effectiveness of programs being supplied to educators. Finally, to improve efficiency, Hill recommends differentiating professional development experiences to meet the needs of the educator, much like the differentiation that is provided to meet the unique needs of the learner, while still meeting the rigorous standards of improving teaching and learning in a meaningful way. Linking specific teachers' weaknesses to professional development experiences that address those weaknesses will ensure that professional development time, often taken at the expense of instructional time in the classroom, will be well worth the investment for the educator and the students in the classroom who benefit from the time invested (Hill, 2009).

Nunn and Jantz (2009) gathered data from four hundred and twenty-nine K-12 teachers, administrators, and support professionals to examine the impact that involvement and implementation of RTI had on teacher efficacy. They defined teacher efficacy as "how teachers perceive their empowerment to influence positive learning outcomes" (Nunn & Jantz, 2009, p. 599). Participants in this study received substantial training and professional development that consisted of training on RTI core concepts and skills, being assigned to school-based collaborative team that worked to develop key components and strategies relating to the implementation of RTI, and school-based implementation follow-up trainings and consultations. The results of the study indicated that participants that felt involved and confident in their

implementation abilities as a result of the training and professional development, rated themselves significantly higher in areas of teacher efficacy (Nunn & Jantz, 2009).

A comprehensive meta-analysis study completed by Yoon, Duncan, Lee, Scarloss, & Shapley (2007) found that out of over 1,300 studies, only nine showed clear, empirical evidence relevant to the effect of professional development on student learning. Although their study demonstrated how difficult it is to develop a reliable study that compares the effects of professional development experiences to academic achievement in the students impacted in the studies, it also yielded useful information on what trends in professional development were effective. The studies ranged drastically in total time as well as in the intensity and duration teachers engaged in professional development activities, however common trends in presentation among effective models emerged. Their findings indicated that studies that had more than 14 hours of professional development showed a positive and significant effect on student achievement from professional development (Yoon, Duncan, Lee, Scarloss, & Shapley, 2007). The results of the study concluded that professional development has the greatest impact on student achievement when three key steps have been taken: availability of quality professional development experiences, application of knowledge and skills gained, and finally raised student achievement. The first of the three sets requires the professional development provided must be of overall high quality. Providing high quality professional development experiences to teachers will allow for the next steps to occur. Teachers must have the motivation and abilities to take the knowledge gained from the professional development and apply it to their teaching practices in a way that yields an increase in student achievement. Due to the nature of this research study, this review of literature will focused on two main components out of the larger list: 1) effective Tier I

instructional strategies otherwise known as the scientifically and/or research-based instructional strategies used in the general education setting for all students, and 2) the need for effective professional development and collaboration between professional stakeholders to ensure that these instructional strategies are effectively being used. These two components were selected based on my review of research that took into account the perspectives held by teachers, administrators and school psychologists on the needed components as well as a synthesis study that examined the components as a whole in several secondary field study environments.

### **Methodology**

The research question that guided this study is: To what extent will professional development experience(s) focused on previously identified issues and concerns relating to RTI Tier I Instructional strategies, impact general education teachers' perceptions of specific Tier I practices? Given the research topic and questions and purpose of this research study, a qualitative methodology was used to collect, design and analyze the effects of the professional development experiences through the use of informal teacher interviews and pre and post surveys.

In order to proceed with strategically designing a staff development plan focused on effective Tier I instructional strategies at the Kinni Falls High School, it was necessary to determine what the current teacher perceptions were of Tier I practices. I developed pre and post surveys based on elements of co-teaching and differentiation strategies identified in interviews with teachers. The pre survey was used to establish a baseline of teacher perceptions and to identify the elements of co-teaching and differentiation that were rated the highest "Priority of Use" and lowest "Confidence in Use". Following the collection of this baseline data, a

strategically designed professional development plan was developed and provided to staff to address the elements identified in the pre survey. Teachers were able to select professional development experience(s) that best aligned with their own personal areas of interest and need. Following the completion of the professional development experiences, the post survey was administered to participating teachers to determine the effects the professional development experience(s) had on teachers' perceptions relating to Tier I Instructional strategies.

### **Participants and Setting**

Kinni Falls High School is located in a rural area located in West Central Wisconsin. The town has an approximate population of 12,000 residents and is home to one of the state of Wisconsin's universities. Kinni Falls High School includes approximately 950 ninth through twelfth grade students. The student population consists of approximately 15% socioeconomically disadvantaged students, 11% students identified with at least one disability, less than 1% English Language Learners, and 8% non-Caucasian (<http://wisedash.dpi.wi.gov>).

Kinni Falls High School employs six full and one part time language arts teachers, three full time specific learning disabilities teachers and two full time emotional and behavior disorder teachers. Of the seven high school general education language arts teachers, two are male and five are female. Of the five high school special education teachers, four are female and one is male. All participants are caucasian and were at least 18 years old at the time of participation in the research study.

One special education teacher and two English language arts teachers participated in both of the differentiated book study and co-teaching collaboration and planning professional development experiences. Two special education teachers and three English language arts

teachers participated in only the differentiated book study professional development. One special education teacher participated in only the co-teaching collaboration and planning professional development experience. One special education and two English language arts teachers did not participate in either professional development experience and functioned as the control group for this action research study [Figure 1].

Participant ID	Book Study: Differentiated Instruction	Co-Teaching: Collaboration and Planning
GNED201	X	X
GNED202	X	
GNED203	X	
GNED204	X	
GNED205		
GNED206		
GNED207	X	X
SPED201	X	X
SPED202		
SPED203		X
SPED204	X	
SPED205	X	
TOTAL PARTICIPANTS	8/12=66.7%	4/12=33.3%
PARTICIPATED IN ONE OR MORE PD EXPERIENCE	9/12=75%	
PARTICIPATED IN BOTH PD EXPERIENCE	3/12=25%	
NON-participants	3/12=25%	

**Figure 1. Professional Development Participants.** This figure illustrates the professional development participants according to survey identification code.

## Materials

I designed the pre survey (Survey I, Appendix A) and post survey (Survey II, Appendix B) to evaluate teachers' perceptions of "Priority of Use" as well as "Confidence in Use" of key elements of RTI Tier I interventions strategies for co-teaching and differentiation strategies within their general education classrooms. I generated elements of co-teaching and

differentiation strategies based on discussions with study participants and the literature review. Survey I and II used a 3-point Likert scale of high (3), medium (2) and low (1) to rate teachers perceptions of “Priority of Use” for each element and a 4-point Likert scale of very confident (1), somewhat confident (2), somewhat unsure (3), and very unsure (4) to rate teacher’s perceptions of “Confidence in Use” for each element.

Survey I was given as a baseline prior to teacher participation in professional development experience(s) and was also used to narrow the focus of the professional development experience(s) for participating teachers. Survey II was used following professional development experience(s) and was designed to measure the change in perception of either priority of use and/or confidence in use as affected by the professional development experience(s). Additional professional development evaluation forms were provided to professional development participants to collect overall input on the effectiveness of the personal development experience and aid in the planning of future personal development experiences (Appendices C and D).

### **Procedures**

I asked potential participants in the survey if they would be interested in participating in an action research project focusing on Tier I RTI Instructional interventions in the areas of co-teaching and inclusion and differentiation strategies. During these conversations, information provided was used to narrow the focus of the instructional interventions included in Survey I and II. Teachers who agreed to participate in the action research project were then given a paper copy of Survey I to be completed. Following the completion of Survey I, I analyzed data from the surveys and used them as a baseline to determine areas of interest and need in planning a

professional development plan. Teachers then voluntarily participated in strategically designed professional development experiences based on identified areas of interest and need and types of desired professional development.

Participants in the co-teaching and inclusion professional development experience engaged in at least one half-day collaboration and planning session per nine-week term. During these collaboration sessions, co-teachers worked in pairs (one general education English language arts teacher and one special education teacher licensed in the area of specific learning disabilities), to develop an outline of events and to review upcoming instructional materials and strategies. Co-teaching pairs worked to identify materials that needed to be modified to meet the needs of a variety of students as well as to discuss who and how the material would be presented to students in the classroom. In addition to the collaboration and planning sessions, the co-teaching pairs also met at least once per week for a period of time ranging from thirty to sixty minutes to collaborate and plan as the term progressed.

Participants in the differentiation strategies professional development experience engaged in scheduled reading and group discussion sessions every other week for eight to ten weeks using *The Differentiated Classroom: Responding to the Needs of All Learners, 2nd Edition (2014)* by Carol Tomlinson who is a leading researcher in the areas of instruction and differentiation. At the discussion sessions, the group identified goals and objectives to the book study, barriers to personal implementation of strategies, pieces of information that individuals found either especially insightful or useful as well as ways in which the identified differentiation strategies identified throughout the readings could be implemented within the instructional settings. In between discussion sessions, the participants read and reflected independently on assigned

readings that ranged from two to three chapters long. Upon completion of the book, several members of the study group met individually with the researcher to share implementation plans based on insights gleaned from the book and group discussions.

Following the professional development experience(s), teachers were then asked to complete a Survey II to collect data on the effects the professional development experience(s) had on their perceived “Priority of Use” and “Confidence in Use” of Tier I RTI Instructional Strategies. Additional questions were asked to collect specific feedback on perceptions of effectiveness of professional development experience to provide useful information of intended instructional strategies.

A summary of the events are as follows [Figure 2]:

Event	Completion
1. Teachers participating in the Action Research Project were asked verbal, informal questions to narrow research area.	Spring, 2014
2. Participating Teachers were asked to sign consent forms to participate in the research project.	Fall, 2014
3. Teachers completed Survey I.	Fall, 2014
4. Teachers were provided with initial results of the baseline surveys.	Fall, 2014
5. Teachers who expressed an interest in completing professional development experience(s) based on the results, participated in professional development experience(s); participation varied depending on level of interest, availability and willingness to participate in options offered.	Winter 2014-Spring 2015
6. Teachers completed <i>Professional Development Evaluations</i> relating to each	Spring 2015

professional development experience.	
7. Teachers completed Survey II.	Spring 2015
8. Results were shared with participants	Spring 2015
9. Follow-up action was determined; include additional professional development experiences being recommended and offered.	Spring 2015

**Figure 2. Events of Action Research Project. This figure illustrates the events and approximate timeline that each event was completed.**

### Data Analysis

Data from Survey I were analyzed in two ways. First, I established a baseline from Survey I data. Each survey response was tallied and assigned a point value according to the Likert scale previously described in the materials section of this research study. An average rating was calculated for each *Element of Differentiation Strategies* and each *Element of Co-Teaching and Inclusion* in the areas of “Priority of Use” and confidence in use. Averages for each element were combined to obtain a raw score use to determine which elements obtained the highest rated “Priority of Use” and lowest average “Confidence in Use” to identify areas to focus on for professional development.

Following professional development, data were collected and analyzed again using survey II. An average rating was calculated for both perceptions of “Priority of Use” and “Confidence in Use” for each *Element of Differentiation Strategies* and *Element of Co-Teaching and Inclusion* for responses on Survey I and Survey II. Data from the Survey I and Survey II is reported using three subgroups for comparison: total surveys (n=12), those who participated in the given professional development experience (differentiation book study n=8; co-teaching n=4) and those did not participate in the given professional development experience (differentiation

book study n=4; co-teaching n=8). The average difference, or change in perceptions, was then calculated for each *Element of Differentiation Strategies* and *Element of Co-Teaching and Inclusion* to determine the effect the professional development experience(s) had on teacher perceptions of “Priority of Use” and “Confidence in Use”

## Results

### Participant Background Information

The initial survey indicated that there were two to four teachers who taught grade specific classes at each grade level (ninth, tenth, eleventh and twelfth). Additionally, a majority (ten out of twelve) of teachers taught at least one class that included mixed grades. Seven out of twelve, or 58.3% of the individuals participating in this project, indicated that they are general education teachers. Five out of twelve, or 41.7% indicated that they were special education teachers. Of the individuals that completed the survey, 25% indicated they had one to five years of teaching experience, 25% indicated having six to ten years, 16.7% indicated having eleven to fifteen years of teaching experience, and the majority, 33.3% indicated having fifteen or more years of experience teaching in the content area that they currently teach. Having more than 50% of the individuals surveyed with ten or more years of experience teaching was an asset to this project.

According to Survey I responses 25% have obtained master’s degree plus additional credits, 25% have obtained their master’s degree, 33.3% have obtained their bachelor’s degrees plus additional credits and 16.7% have their bachelor’s without additional credits. Ten out of the twelve individuals that completed the survey have completed additional graduate level course work beyond their Bachelor’s degrees. Areas of study indicated in the surveys included: English as a second language and reading, assessment, differentiating instruction, and multiple

intelligences, brain development, reading strategies, history certification, and differentiation, reading and supervision, special education and reading, education, and literacy studies. The diversity in individual graduate level course work was an excellent resource to draw from to help strengthen the learning community as a team and as a whole.

### **Co-Teaching & Inclusion**

According to Survey I results [Figure 3], the *Elements of Co-Teaching and Inclusion* that were indicated with both the highest level of priority and the lowest levels of confidence of use (out of a highest possible raw score of 7) were: C13. Ability to plan for class(es) as co-teachers (5.33); C5. Ability to modify goals for different levels of students is shared by both co-teachers (5.22); C2. Understanding of the curriculum standards with respect to the content area in the classroom is shared by both co-teachers (5.08); C14. Ability to share planning responsibilities for co-taught class(es) between both co-teachers (5.0); C16. Ability to easily read the nonverbal cues of the other teacher in co-taught classroom (4.92); and C8. Ability to present co-taught lessons (4.84).

Common themes that presented themselves in the additional comments on Survey I included concerns over difficulty “relinquishing” or sharing control and responsibilities in the classroom, especially if the individuals do not feel comfortable with their co-teacher or that a relationship had not previously been developed prior to the co-teaching arrangement between both teachers. It was also indicated several times that there isn’t really a co-teaching model being used, instead that special education provides more of a supporting role to the general education teacher(s). Several responses expressed a desire and willingness to learn more about co-teaching despite the concerns expressed.

Average	Priority of Use			Element of Co-Teaching/Inclusion	Confidence in Use				Average	Raw
	H	M	L		VC	SC	SU	VU		
2.5	6	6	0	C1. Ability to use many measures for grading student performance is shared between co-teachers	1	9	2	0	2.08	4.58
2.75	9	3	0	C2. Understanding of the curriculum standards with respect to the content area in the classroom is shared by both co-teachers	2	5	4	1	2.33	5.08
2.75	9	3	0	C3. Ability to share instructional materials needed to teach the curriculum between co-teachers	4	5	3	0	1.92	4.67
2.75	9	3	0	C4. Ability of co-teachers to share curriculum resources	4	4	3	0	1.75	4.0
2.58	8	3	1	C5. Ability to modify goals for different levels of students is shared by both co-teachers	1	3	6	1	2.64	5.22
2.58	8	3	1	C6. Ability of both co-teachers in the classroom to agree on the goals of the classroom	2	5	4	0	2.0	4.58
2.83	10	2	0	C7. Ability to move freely about the space in the co-taught classroom	6	5	0	0	1.33	4.16
2.17	3	8	1	C8. Ability to present co-taught lessons	0	5	6	1	2.67	4.84
2.17	4	6	2	C9. Ability to change position/role of co-teachers in the classroom fluidly	1	6	2	2	2.4	4.57
2.58	8	3	1	C10. Ability to use a variety of classroom management techniques together as co-teachers to enhance the learning of all students	3	6	3	0	2.0	4.58
2.42	6	5	1	C11. Ability to share the classroom management responsibilities between co-teachers	2	6	3	0	2.09	4.51
2.42	6	5	1	C12. Ability to establish classroom rules and routines together as co-teachers	3	7	0	2	2.08	4.5
2.75	10	1	1	C13. Ability to plan for class(es) as co-teachers	3	1	6	2	2.58	5.33
2.5	7	4	1	C14. Ability to share planning responsibilities for co-taught class(es) between both co-teachers	3	1	7	1	2.5	5.0
2.58	7	5	0	C15. Ability to plan with co-teacher spontaneously as changes occur during the instructional lesson	4	5	3	0	1.92	4.5
2.25	4	7	1	C16. Ability to easily read the non-verbal cues of the other teacher in co-taught classroom	1	5	3	3	2.67	4.92
2.42	7	3	2	C17. Ability to use humor between co-teachers in the classroom	6	5	0	1	1.67	4.09
2.91	10	1	0	C18. Ability to communicate openly and honestly between co-teachers	6	5	1	0	1.58	4.49

Figure 3. Survey I Results. This figure illustrates the results from the initial survey's given to teachers relating to co-teaching and inclusion strategies.

**Differentiation**

According to Survey I results [Figure 4], the *Elements of Differentiation* that were indicated with both the highest level of priority and the lowest levels of confidence of use (out of a highest possible raw score of 7) were: D1. Overall understanding of the concepts and components of differentiation (5.16); D2. Overall ability to implement differentiated instruction in my classroom (5.0); and D8. Ability to provide opportunities for acceleration when student(s) demonstrate mastery of content (4.83).

Overall there was less additional feedback provided on Survey I in the area of differentiation. Common themes relating to differentiation in the additional comments included: the need for additional training to further develop differentiation strategies and the classroom management aspect of implementing differentiation strategies effectively as well as concerns over the ability to effectively use them when co-teaching due to differing applications and ideals of what differentiation is/should be.

Average	Priority of Use			Element of Differentiation Strategies	Confidence in Use				Average	Raw
	H	M	L		VC	SC	SU	YU		
2.58	7	5	0	D1. Overall understanding of the concepts and components of differentiation	1	4	6	1	2.58	5.16
2.5	7	4	1	D2. Overall ability to implement differentiated instruction in my classroom	1	5	5	1	2.5	5.0
2.25	6	3	3	D3. Ability to use pretests to determine if students have mastered the material covered in a particular unit prior to instruction	2	8	1	1	2.08	4.33
2.25	6	3	3	D4. Ability to use various survey techniques to obtain student feedback on understanding of instruction	1	8	3	0	2.17	4.42
2.5	8	2	2	D5. Ability to use ongoing formative assessment to drive my instruction for each student in my class	1	9	2	0	2.08	4.58
2.5	6	6	0	D6. Ability to adjust assignments in order to meet student's learning needs based on feedback and formative assessment(s)	0	9	3	0	2.25	4.75
1.83	2	6	4	D7. Ability to eliminate or compact curriculum material that students have already mastered	0	7	2	2	2.55	4.38
2.25	6	3	3	D8. Ability to provide opportunities for acceleration when student(s) demonstrate mastery of content	1	6	2	3	2.58	4.83
2.25	4	7	1	D9. Ability to provide tiered assignments based on student readiness	0	7	4	1	2.5	4.75
2.33	6	4	2	D10. Ability to assign differentiated homework based on student's individual needs	0	8	2	2	2.5	4.83
2.17	4	6	2	D11. Ability to use flexibly grouped students by readiness/ability in my class	3	5	3	1	2.17	4.34
2.17	5	4	3	D12. Ability to provide students with opportunities to work with other students who have similar interests and abilities	3	9	0	0	1.75	3.92
2.17	3	8	1	D13. Ability to use direct instruction strategies (lecture style)	6	5	1	0	1.58	3.75
2.67	7	5	0	D14. Ability to use inquiry-based learning strategies (learning by discovery)	3	7	1	1	2.0	4.67
2.67	7	5	0	D15. Ability to use cooperative learning strategies	3	9	0	0	1.75	4.42
2.17	5	4	3	D16. Ability to use portfolios to assess student learning	4	6	2	0	1.83	4
2.67	9	2	1	D17. Ability to use rubrics to assess student learning	10	2	0	0	1.17	3.84
2.55	7	3	1	D18. Ability to use performance-based assessments to assess student learning	5	4	2	0	1.73	4.28

Figure 4. Survey I. This figure illustrates the results from the initial surveys given to teachers relating to differentiation strategies.

## Professional Development

According to the baseline survey results [see Figure 5], the types of professional development that obtained the highest interest ratings (out of a highest possible average score of 3) included: P8. School visits/observations (2.4); P7. Book/Article Reading Groups (2.2); and P4. Focus/study groups (2.1). The preferred frequency and duration for professional development activities P8. School visit/observations, varied in frequency between once per month to once per year with a duration of one day per visit. The preferred frequency and duration for professional development activities P7. Book/Article Reading Groups, and P4. Focus/study groups was once per month with the duration varying. The greatest availability to participate in professional development was after school and during early release or staff development days.

Average	Interest level			Type
	H 3	M 2	L 1	
2.0	4	1	4	P1. Individual or Group Action research
1.5	0	4	4	P2. Individual or Group Presentations
2.0	3	2	3	P3. Participation in mentoring/coaching
2.1	3	4	2	P4. Focus/study groups
2.0	4	2	4	P5. Classroom visits and peer observations/coaching
2.0	4	2	4	P6. Outside Conference/Workshops
2.2	4	3	2	P7. Book/Article Reading Groups
2.4	5	4	1	P8. School visits/observations

Figure 5. Survey I Professional Development. This figure illustrates the professional development preferences indicated on the pre-survey.

## Co-Teaching & Inclusion

According to data analysis [Figures 6, 7, & 8] all three subgroups: combined (n=12), with professional development (n=4) and without demonstrated (n=8) experienced a modest increase in their perception of the “Priority of Use” of co-teaching strategies. The subgroup that participated in the co-teaching and planning experience demonstrated an increase in confidence

of use of .27 [Figure 8] and the subgroup that did not participate in the professional development experiences of .27 [Figure 7]. This led to an overall average increase in confidence of use of co-teaching and inclusion strategies of .28 [Figure 6].

In the area of priority of use the analysis results indicated that all three of the subgroups (combined, with, and without professional development) demonstrated a modest increase in the perception of "Priority of Use" overall for co-teaching and inclusion elements from the initial survey to the final survey. The subgroup that participated in co-teaching and planning experience demonstrated an average increase in perceived priority of use of .13 [see Figure 8] while the subgroup that did not participate in the professional development demonstrated an average increase of .11 [see Figure 7]. This led to an overall average increase in perceived priority of use of .12 [see Figure 6].

Element of Co-Teaching/Inclusion	Combined N=12					
	Priority of Use H=3, M=2, L=1			Confidence in Use VC=1, SC=2, SU=3, VU=4		
	Initial	Final	Change	Initial	Final	Change
C1. Ability to use many measures for grading student performance is shared between co-teachers	2.5	2.58	+08	2.08	2.09	+01
C2. Understanding of the curriculum standards with respect to the content area in the classroom is shared by both co-teachers	2.75	2.83	+08	2.33	2.09	-.24
C3. Ability to share instructional materials needed to teach the curriculum between co-teachers	2.75	2.83	+08	1.92	1.45	-.47
C4. Ability of co-teachers to share curriculum resources	2.75	2.92	+17	1.91	1.45	-.30
C5. Ability to modify goals for different levels of students is shared by both co-teachers	2.58	2.83	+25	2.64	1.55	-1.09
C6. Ability of both co-teachers in the classroom to agree on the goals of the classroom	2.58	2.75	+17	2.18	1.91	-.09
C7. Ability to move freely about the space in the co-taught classroom	2.83	2.67	-.16	1.45	1.18	-.15
C8. Ability to present co-taught lessons	2.17	2.42	+25	2.67	2.18	-.49
C9. Ability to change position/role of co-teachers in the classroom fluidly	2.17	2.58	+41	2.45	2.18	-.22
C10. Ability to use a variety of classroom management techniques together as co-teachers to enhance the learning of all students	2.58	2.75	+17	2.0	2.0	0
C11. Ability to share the classroom management responsibilities between co-teachers	2.42	2.75	+33	2.09	2.0	-.09
C12. Ability to establish classroom rules and routines together as co-teachers	2.42	2.5	+08	2.08	2.0	-.08
C13. Ability to plan for class(es) as co-teachers	2.75	2.58	-.17	2.58	2.27	-.31
C14. Ability to share planning responsibilities for co-taught class(es) between both co-teachers	2.5	2.5	0	2.5	2.0	-.5
C15. Ability to plan with co-teacher spontaneously as changes occur during the instructional lesson	2.58	2.58	0	1.92	2.0	+08
C16. Ability to easily read the non-verbal cues of the other teacher in co-taught classroom	2.25	2.55	+30	2.67	1.9	-.77
C17. Ability to use humor between co-teachers in the classroom	2.42	2.5	+08	1.67	1.64	-.03
C18. Ability to communicate openly and honestly between co-teachers	2.91	2.92	+01	1.58	1.73	+15
<b>OVERALL AVERAGE RATING</b>	<b>2.55</b>	<b>2.67</b>	<b>+12</b>	<b>2.15</b>	<b>1.87</b>	<b>-.28</b>

Figure 6. Elements of Co-teaching and Inclusion Combined Results. This table illustrates the average change in teacher perceptions from the initial survey to the final for each "Element of Co-teaching/Inclusion".

Element of Co-Teaching/Inclusion	With Differentiation PD N=4					
	Priority of Use H=3, M=2, L=1			Confidence in Use VC=1, SC=2, SU=3, VU=4		
	Initial	Final	Change	Initial	Final	Change
C1. Ability to use many measures for grading student performance is shared between co-teachers	2.25	2.75	+0.5	2.25	2.0	-0.25
C2. Understanding of the curriculum standards with respect to the content area in the classroom is shared by both co-teachers	2.5	2.75	+0.25	2.75	2.5	-0.25
C3. Ability to share instructional materials needed to teach the curriculum between co-teachers	2.75	2.75	0	2.25	1.5	-0.75
C4. Ability of co-teachers to share curriculum resources	2.75	2.75	0	2.25	1.75	-0.50
C5. Ability to modify goals for different levels of students is shared by both co-teachers	2.25	2.75	+0.5	2.67	1.75	-0.92
C6. Ability of both co-teachers in the classroom to agree on the goals of the classroom	2.5	2.5	0	2.33	2.0	-0.33
C7. Ability to move freely about the space in the co-taught classroom	3.0	3.0	0	1.25	1.0	-0.25
C8. Ability to present co-taught lessons	2.25	2.25	0	2.75	2.0	-0.75
C9. Ability to change position/role of co-teachers in the classroom fluidly	1.75	2.25	+0.5	2.67	2.25	-0.42
C10. Ability to use a variety of classroom management techniques together as co-teachers to enhance the learning of all students	2.5	2.25	-0.25	1.5	2.0	+0.50
C11. Ability to share the classroom management responsibilities between co-teachers	2.5	2.75	+0.25	2.0	1.75	-0.25
C12. Ability to establish classroom rules and routines together as co-teachers	2.25	2.5	+0.25	2.0	2.0	0
C13. Ability to plan for class(es) as co-teachers	2.75	2.75	0	2.5	1.5	-1.0
C14. Ability to share planning responsibilities for co-taught class(es) between both co-teachers	2.25	2.75	+0.5	2.5	1.5	-1.0
C15. Ability to plan with co-teacher spontaneously as changes occur during the instructional lesson	2.5	2.75	+0.25	1.5	1.75	
C16. Ability to easily read the non-verbal cues of the other teacher in co-taught classroom	2.75	2.5	-0.25	1.75	2.0	+0.25
C17. Ability to use humor between co-teachers in the classroom	2.75	2.75	0	1.25	1.25	0
C18. Ability to communicate openly and honestly between co-teachers	3.0	2.75	+0.25	1.25	2.0	+0.75
<b>OVERALL AVERAGE RATING</b>	2.51	2.64	+0.13	2.08	1.81	-0.27

Figure 7. Elements of Co-teaching and Inclusion with PD Results. This table illustrates the average change in teacher perceptions from the initial survey to the final for each "Element of Co-teaching/Inclusion".

Element of Co-Teaching/Inclusion	With Differentiation PD N=4					
	Priority of Use H=3, M=2, L=1			Confidence in Use VC=1, SC=2, SU=3, VU=4		
	Initial	Final	Change	Initial	Final	Change
C1. Ability to use many measures for grading student performance is shared between co-teachers	2.25	2.75	+0.5	2.25	2.0	-0.25
C2. Understanding of the curriculum standards with respect to the content area in the classroom is shared by both co-teachers	2.5	2.75	+0.25	2.75	2.5	-0.25
C3. Ability to share instructional materials needed to teach the curriculum between co-teachers	2.75	2.75	0	2.25	1.5	-0.75
C4. Ability of co-teachers to share curriculum resources	2.75	2.75	0	2.25	1.75	-0.50
C5. Ability to modify goals for different levels of students is shared by both co-teachers	2.25	2.75	+0.5	2.67	1.75	-0.92
C6. Ability of both co-teachers in the classroom to agree on the goals of the classroom	2.5	2.5	0	2.33	2.0	-0.33
C7. Ability to move freely about the space in the co-taught classroom	3.0	3.0	0	1.25	1.0	-0.25
C8. Ability to present co-taught lessons	2.25	2.25	0	2.75	2.0	-0.75
C9. Ability to change position/role of co-teachers in the classroom fluidly	1.75	2.25	+0.5	2.67	2.25	-0.42
C10. Ability to use a variety of classroom management techniques together as co-teachers to enhance the learning of all students	2.5	2.25	-0.25	1.5	2.0	+0.50
C11. Ability to share the classroom management responsibilities between co-teachers	2.5	2.75	+0.25	2.0	1.75	-0.25
C12. Ability to establish classroom rules and routines together as co-teachers	2.25	2.5	+0.25	2.0	2.0	0
C13. Ability to plan for class(es) as co-teachers	2.75	2.75	0	2.5	1.5	-1.0
C14. Ability to share planning responsibilities for co-taught class(es) between both co-teachers	2.25	2.75	+0.5	2.5	1.5	-1.0
C15. Ability to plan with co-teacher spontaneously as changes occur during the instructional lesson	2.5	2.75	+0.25	1.5	1.75	
C16. Ability to easily read the non-verbal cues of the other teacher in co-taught classroom	2.75	2.5	-0.25	1.75	2.0	+0.25
C17. Ability to use humor between co-teachers in the classroom	2.75	2.75	0	1.25	1.25	0
C18. Ability to communicate openly and honestly between co-teachers	3.0	2.75	+0.25	1.25	2.0	+0.75
<b>OVERALL AVERAGE RATING</b>	2.51	2.64	+0.13	2.08	1.81	-0.27

**Figure 8. Elements of Co-teaching and Inclusion with PD Results.** This table illustrates the average change in teacher perceptions from the initial survey to the final for each "Element of Co-teaching/Inclusion".

**Differentiation**

According to data analysis results [Figures 9, 10, & 11] all three subgroups: combined (n=12), with professional development (n=8) and without demonstrated (n=4) experienced a modest increase in their perception of their “Confidence in Use” of differentiation strategies. The subgroup that participated in the book study professional development experience demonstrated an increase in confidence of use of .38 [Figure 11] and the subgroup that did not participate in the professional development experiences demonstrated an increase of .28 [Figure 10]. This lead to an overall average increase in confidence of use of .34 points [Figure 9].

In the area of priority of use, data analysis indicated that two of the subgroups, combined and with professional development, demonstrated a modest increase in “Priority of Use”, while the subgroup without professional development demonstrated a very slight decrease in the perception of “Priority of Use” overall for differentiation elements from the initial survey to the final survey. The subgroup that participated in the book study demonstrated an average increase in perceived priority of use of .13 [ Figure 11] while the subgroup that did not participate in the professional development demonstrated an average decrease of .05 [Figure 10]. This lead to an overall average increase in perceived priority of use of differentiation strategies of .02 [Figure 9].

Element of Differentiation Strategies	Combined N=12					
	Priority of Use H=3, M=2, L=1			Confidence in Use VC=1, SC=2, SU=3, VU=4		
	Initial	Final	Change	Initial	Final	Change
D1. Overall understanding of the concepts and components of differentiation	2.58	2.67	+0.09	2.58	1.83	-.75
D2. Overall ability to implement differentiated instruction in my classroom	2.5	2.75	+.25	2.5	1.75	-.75
D3. Ability to use pretests to determine if students have mastered the material covered in a particular unit prior to instruction	2.25	2.25	0	2.08	1.58	-.50
D4. Ability to use various survey techniques to obtain student feedback on understanding of instruction	2.25	2.08	-.17	2.17	2.08	-.09
D5. Ability to use ongoing formative assessment to drive my instruction for each student in my class	2.5	2.58	+.08	2.08	1.83	-.25
D6. Ability to adjust assignments in order to meet student's learning needs based on feedback and formative assessment(s)	2.5	2.67	+.17	2.25	1.83	-.42
D7. Ability to eliminate or compact curriculum material that students have already mastered	1.83	2.25	+.42	2.55	2.17	-.38
D8. Ability to provide opportunities for acceleration when student(s) demonstrate mastery of content	2.25	2.42	+.17	2.58	2.0	-.58
D9. Ability to provide tiered assignments based on student readiness	2.25	2.25	0	2.5	2.0	-.50
D10. Ability to assign differentiated homework based on student's individual needs	2.33	2.42	+.09	2.5	2.08	-.42
D11. Ability to use flexibly grouped students by readiness/ability in my class	2.17	2.67	+.50	2.17	1.67	-.50
D12. Ability to Provide students with opportunities to work with other students who have similar interests and abilities	2.27	2.42	+.25	1.75	1.58	-.17
D13. Ability to use direct instruction strategies (lecture style)	2.17	2.08	-.09	1.58	1.42	-.16
D14. Ability to use inquiry-based learning strategies (learning by discovery)	2.58	2.17	-.50	2.0	1.83	-.17
D15. Ability to use cooperative learning strategies	2.58	2.42	-.25	1.75	1.75	0
D16. Ability to use portfolios to assess student learning	2.17	1.75	-.42	1.83	1.58	-.25
D17. Ability to use rubrics to assess student learning	2.67	2.50	-.17	1.17	1.25	+.08
D18. Ability to use performance-based assessments to assess student learning	2.55	2.42	-.13	1.73	1.42	-.31
<b>OVERALL AVERAGE RATING</b>	<b>2.36</b>	<b>2.38</b>	<b>+.02</b>	<b>2.10</b>	<b>1.76</b>	<b>-.34</b>

Figure 9. Elements of Differentiation Combined Results. This table illustrates the average change in teacher perceptions from the initial survey to the final for each "Element of Differentiation".

Element of Differentiation Strategies	Without Differentiation PD N=4					
	Priority of Use H=3, M=2, L=1			Confidence in Use VC=1, SC=2, SU=3, VU=4		
	Initial	Final	Change	Initial	Final	Change
D1. Overall understanding of the concepts and components of differentiation	2.75	2.5	-.25	2.75	2.25	-.50
D2. Overall ability to implement differentiated instruction in my classroom	2.75	2.75	0	2.5	1.75	-.75
D3. Ability to use pretests to determine if students have mastered the material covered in a particular unit prior to instruction	2.5	2.25	-.25	1.75	1.5	-.25
D4. Ability to use various survey techniques to obtain student feedback on understanding of instruction	2.25	1.75	-.50	2.25	2.5	+.25
D5. Ability to use ongoing formative assessment to drive my instruction for each student in my class	2.75	2.5	-.25	2.0	2.0	0
D6. Ability to adjust assignments in order to meet student's learning needs based on feedback and formative assessment(s)	2.75	2.5	-.25	2.5	1.75	-.75
D7. Ability to eliminate or compact curriculum material that students have already mastered	1.75	2.25	+.50	3.33	2.0	-1.33
D8. Ability to provide opportunities for acceleration when student(s) demonstrate mastery of content	2.25	2.25	0	3.0	2.25	-.75
D9. Ability to provide tiered assignments based on student readiness	2.25	2.5	+.25	2.75	2.0	-.75
D10. Ability to assign differentiated homework based on student's individual needs	2.5	2.75	+.25	2.5	1.5	-1.0
D11. Ability to use flexibly grouped students by readiness/ability in my class	2.5	3.0	+.50	1.75	1.5	-.25
D12. Ability to Provide students with opportunities to work with other students who have similar interests and abilities	2.0	2.25	+.25	1.5	1.75	+.25
D13. Ability to use direct instruction strategies (lecture style)	2.0	2.25	+.25	1.5	1.5	0
D14. Ability to use inquiry-based learning strategies (learning by discovery)	2.5	2.0	-.50	2.0	2.0	0
D15. Ability to use cooperative learning strategies	2.25	2.0	-.25	1.75	2.25	-.5
D16. Ability to use portfolios to assess student learning	2.5	2.0	-.25	1.5	1.5	0
D17. Ability to use rubrics to assess student learning	2.75	2.75	0	1.0	1.0	0
D18. Ability to use performance-based assessments to assess student learning	2.67	2.25	-.42	1.33	1.5	+.12
<b>OVERALL AVERAGE RATING</b>	<b>2.43</b>	<b>2.38</b>	<b>-.05</b>	<b>2.09</b>	<b>1.81</b>	<b>-.28</b>

Figure 10. Elements of Differentiation without Differentiation PD Results. This table illustrates the average change in teacher perceptions from the initial survey to the final for each "Element of Differentiation".

Element of Differentiation Strategies	With Differentiation PD N=8					
	Priority of Use H=3, M=2, L=1			Confidence in Use VC=1, SC=2, SU=3, VU=4		
	Initial	Final	Change	Initial	Final	Change
D1. Overall understanding of the concepts and components of differentiation	2.5	2.75	+25	2.5	1.63	-.87
D2. Overall ability to implement differentiated instruction in my classroom	2.38	2.75	+37	2.5	1.5	-1.0
D3. Ability to use pretests to determine if students have mastered the material covered in a particular unit prior to instruction	2.13	2.25	+12	2.25	1.63	-.62
D4. Ability to use various survey techniques to obtain student feedback on understanding of instruction	2.25	2.25	0	2.13	1.88	-.25
D5. Ability to use ongoing formative assessment to drive my instruction for each student in my class	2.38	2.63	+25	2.13	1.75	-.38
D6. Ability to adjust assignments in order to meet student's learning needs based on feedback and formative assessment(s)	2.38	2.75	+37	2.13	1.88	-.25
D7. Ability to eliminate or compact curriculum material that students have already mastered	1.88	2.25	+12	2.25	2.25	0
D8. Ability to provide opportunities for acceleration when student(s) demonstrate mastery of content	2.25	2.5	+25	2.38	1.88	-.5
D9. Ability to provide tiered assignments based on student readiness	2.25	2.13	-.12	2.38	2.0	-.38
D10. Ability to assign differentiated homework based on student's individual needs	2.25	2.25	0	2.5	2.38	-.12
D11. Ability to use flexibly grouped students by readiness/ability in my class	2.0	2.5	+5	2.38	1.75	-.63
D12. Ability to Provide students with opportunities to work with other students who have similar interests and abilities	2.38	2.5	+12	1.88	1.5	-.38
D13. Ability to use direct instruction strategies (lecture style)	2.25	2.0	-.25	1.63	1.38	-.25
D14. Ability to use inquiry-based learning strategies (learning by discovery)	2.63	2.25	-.38	2.0	1.75	-.25
D15. Ability to use cooperative learning strategies	2.75	2.63	-.12	1.75	1.5	-.25
D16. Ability to use portfolios to assess student learning	2.0	1.63	-.37	2.0	1.63	-.37
D17. Ability to use rubrics to assess student learning	2.63	2.38	-.25	1.25	1.38	+.13
D18. Ability to use performance-based assessments to assess student learning	2.5	2.5	0	1.88	1.38	-.5
<b>OVERALL AVERAGE RATING</b>	<b>2.32</b>	<b>2.39</b>	<b>+.07</b>	<b>2.11</b>	<b>1.73</b>	<b>-.38</b>

Figure 11. Elements of Differentiation with Differentiation PD Results. This table illustrates the average change in teacher perceptions from the initial survey to the final for each "Element of Differentiation".

### **Professional Development**

Input collected from the co-teaching collaboration and planning professional development group (n=4) rated the overall quality, content, relevance and usefulness of the experience as excellent to good. All of the participants responded that they agreed or strongly agreed that the outcomes of the experience (gained new information, learned useful strategies, and plan to implement information and/or concepts learned) were met. One of the pairs of co-teachers indicated that they strongly agreed that a supportive climate of professional collaboration was created and that they had opportunities to network and learn from colleagues were supported. The other pair of co-teachers responded that they disagreed, due to lack of administrative support, that a supportive climate of professional collaboration was created and that they had opportunities to network and learn from colleagues were supported. Themes that emerged for the future improvements included the need for more time to collaborate effectively, having the same individuals co-teach the same course in the future for continuity and less pressure to cover material in a short amount of time.

According to the evaluations completed by the group (n=8) that participated in the differentiation professional development experience, most of the participants responded that they agreed that the outcomes of the experience (gained new information, learned useful strategies, and plan to implement information and/or concepts learned) were met. The only overall issues that were expressed were relating to the content of the book selected and not the professional development experience itself. Themes that emerged for the future again included more time and the addition of access to examples in action either through classroom observations or a school visit.

According to the results of Survey II [Figure 12], the types of continued and ongoing professional development that obtained the highest interest ratings (out of a highest possible average score of 3) included: P1. Individual or Group Action research (2.2); P6. Outside conference/workshops (2.2); P8. School visit/observation (2.2) and P7. Book/article reading group (2.1). Overall, the average ratings for interest were slightly lower on Survey II than they were according to the results from Survey I.

Average	Interest level			Type
	H 3	M 2	L 1	
2.2	5	1	3	P1. Individual or Group Action research
1.8	2	3	4	P2. Individual or Group Presentations
2.0	3	4	3	P3. Participation in mentoring/coaching
2.0	3	4	3	P4. Focus/study groups
2.0	2	5	2	P5. Classroom visits and peer observations/coaching
2.2	3	5	1	P6. Outside Conference/Workshops
2.1	3	5	2	P7. Book/Article Reading Groups
2.2	3	5	1	P8. School visits/observations

Figure 12. Survey II Professional Development. This figure illustrates the professional development preferences indicated on the post-survey.

### Discussion/Interpretations

Overall the data showed the minor increase in teacher perceptions of “Confidence in Use” of both *Element of Co-Teaching/Inclusion* and *Elements of Differentiation Strategies* according to the survey results in all three subgroups (combined, with and without professional development) can be attributed to several factors. First, the large number of staff who participated in one or more professional development experiences meant that a large number of teachers within both the English Language Arts and the special education departments participate in some form of professional development. This had a synergetic impact on the group as a whole. For example, one special education teacher that participated in the co-teaching experience reported after completing the final survey, “I actually understood what each of the elements on both the co-teaching and the differentiation surveys were this time around because

of my work with my co-teacher!” This participant rated a higher perceived level of priority of use and confidence of use for both the co-teaching and inclusion elements as well as the differentiation elements even though she only participated in the co-teaching experience. This increase in perception was due to the fact that she was co-teaching with an English Language Arts teacher that was also a participant in the differentiation book group.

Additionally, even though there was a relatively small number of participants (n=4) in the co-teaching and planning experience involved in this research study, several of the individuals involved, both special education and English Language Arts teachers, engaged in teaching less-structured supported or co-taught classes not included in this study. As a result of this, the data collected from those individuals who did not participate in the formal study were still engaged in some form of co-teaching experience and therefore their responses on final surveys reflected this.

The primary factor that teachers indicated inhibited them from participating more or in their ability to more effectively implement some of the strategies more consistently into their teaching practice was lack of time. It was difficult to set-up consistent meeting dates and time throughout the processes due to the many demands and prior commitments within the building. Teachers participating in the study genuinely expressed a desire to learn and grow as teaching professionals. As the research indicated in the review of literature, in order for any professional development experience to be effective adequate time for learning and application is needed.

### **Limitations**

As with any research study, there were many limitations that were encountered throughout the process. Due to the fact that many of the professional development participants

work closely, either as department team members or as co-teachers, with non-participants in one or both of the professional development experiences, some of the data collected through Survey II may have been inflated through interactions and shared information between participants and non-participants.

Additionally, there were limitations in the research surveys themselves. Due to the Likert rating scale used and the small numbers in some of the subgroups in which data was analyzed, averages were impacted more in subgroups that had smaller numbers of participants than in those that had larger numbers. This made it more difficult to analyze the data and make comparisons between subgroups to determine the actual effects of the professional development experience on the perceived “Priority of Use” or “Confidence in Use” of the varying elements of both differentiation strategies and of co-teaching and inclusion.

Finally, this research study took place in a school setting rather than a more controlled setting. This made it very difficult to isolate the effects of the two separate professional development experiences from each other as well as from those who were participants from those who did not participate.

### **Conclusion and Implications**

Despite the challenges faced in arranging the professional development experiences with my fellow teachers, I am encouraged by the enthusiastic conversations that were had throughout the process. I am also encouraged by the overall increase in perceived “Priority of Use” and “Confidence in Use” of the Tier I interventions of differentiation and co-teaching reported by both the participants and the non-participants of the study. Even though Kinni Falls High School was not the ideal environment for conducting research that yielded quantifiable results, it was

heartening to experience the positive ripple effect that can occur when professional development experiences are strategically designed to address specific needs identified within a given group of teaching professionals. I strongly believe the relative success of the professional development experiences can be attributed to the fact that those who participated in the experience were involved in the process from the initial design stage forward. Because of this, the teachers took ownership of the learning process making the experience that much more meaningful and valuable. As a researcher, facilitator, and member of both professional development experiences, teachers saw me as part of the solution not part of yet another initiative being thrown at them from above.

I will share my research findings back with the participants of the study as well as with my building administration and with the Academic Affairs Committee that determines what professional development opportunities included in the Alternative Compensation initiative at the Kinni Falls School District. As a result of this study, I will be recommending to my administration that further professional development, similar to and building off of these professional development experiences, be offered to the teachers at the Kinni Falls High School. Additionally, I will also be recommending that professional development experiences similar to this be expanded to other departments outside of the Special Education and English Language Arts departments in the building.

Additionally, several of the participants expressed an interest in participating in a group action research project in addition to this one to further build on the experiences and knowledge gained from this project. Ideas of action research discussed as a group include a system of peer observations and coaching between teachers to focus on improving the application of knowledge

and skills gained through these initial professional development experiences. I look forward to helping facilitate and participating in this continued professional development experience in the future.

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## Appendix A

**Survey I**

Thank you again for being willing to participate in this survey. I can't express enough how appreciative I am. It is my hope the information gathered from this survey will aid in meaningful collaboration and sharing of knowledge.

In the conversations I have had with the language arts and special education teachers as well as with administration two common areas of need was expressed. I grouped these common areas of need into two categories; differentiation and co-teaching strategies. There were obviously many other ideas shared and expressed in my conversations over the last month or so, but I wanted to start with the most commonly shared areas first!

Please do not write your name on the survey; this study is meant to be confidential. Participation in this research study is completely voluntary. When you have completed the survey, please place the survey in the envelop in my mailbox. Check your name off the list on the outside of the envelop. Once all of the surveys have been returned, I will share the results with all who participated.

**Background Information:**

**B1. What grade(s) do you teach? Circle all that apply.**

9<sup>th</sup>                      10<sup>th</sup>                      11<sup>th</sup>                      12<sup>th</sup>                      Mixed Grade

**B2. What is your educational background?**

BA                      BA+                      MA                      MA+                      Multiple MA

**B3. If you have taken graduate level course work beyond a BA, what area(s) have you studied?**

**B4. How many years of teaching experience in the content area you currently teach do you have?**

1-5 years

6-10 years

11-15 years

15+

**B5. Are you a General Education or Special Education Teacher?**

General Education Teacher

Special Education Teacher

## Appendix A (continued)

**Priority:** On the left side of the survey I would like you to rate the level of priority of use in your classroom for each element as high (H), medium (M) or low (L). As you rate the priority level of each element, please consider the impact each element has on ensuring access to instruction and the acquisition of knowledge and skills in the class(es) you teach.

**Confidence:** On the right side of the survey I would like you to rate your confidence level in your ability to use various elements of either differentiation or co-teaching as very confident (VC), somewhat confident (SC), somewhat unsure (SU) or very unsure (VU).

Priority of Use			Element of Co-Teaching/Inclusion	Confidence in Use			
H	M	L		VC	SC	SU	VU
			C1. Ability to use many measures for grading student performance is shared between co-teachers				
			C2. Understanding of the curriculum standards with respect to the content area in the classroom is shared by both co-teachers				
			C3. Ability to share instructional materials needed to teach the curriculum between co-teachers				
			C4. Ability of co-teachers to share curriculum resources				
			C5. Ability to modify goals for different levels of students is shared by both co-teachers				
			C6. Ability of both co-teachers in the classroom to agree on the goals of the classroom				
			C7. Ability to move freely about the space in the co-taught classroom				
			C8. Ability to present co-taught lessons				
			C9. Ability to change position/role of co-teachers in the classroom fluidly				
			C10. Ability to use a variety of classroom management techniques together as co-teachers to enhance the learning of all students				
			C11. Ability to share the classroom management responsibilities between co-teachers				
			C12. Ability to establish classroom rules and routines together as co-teachers				
			C13. Ability to plan for class(es) as co-teachers				
			C14. Ability to share planning responsibilities for co-taught class(es) between both co-teachers				
			C15. Ability to plan with co-teacher spontaneously as changes occur during the instructional lesson				
			C16. Ability to easily read the non-verbal cues of the other teacher in co-taught classroom				
			C17. Ability to use humor between co-teachers in the classroom				
			C18. Ability to communicate openly and honestly between co-teachers				

Appendix A (continued)

C19. Please use this space to provide additional input relating to co-teaching strategies you would like to learn more about or have a particular strength in that you would be willing to share.

## Appendix A (continued)

Priority of Use			Element of Differentiation Strategies	Confidence in Use			
H	M	L		VC	SC	SU	VU
			D1. Overall understanding of the concepts and components of differentiation				
			D2. Overall ability to implement differentiated instruction in my classroom				
			D3. Ability to use pretests to determine if students have mastered the material covered in a particular unit prior to instruction				
			D4. Ability to use various survey techniques to obtain student feedback on understanding of instruction				
			D5. Ability to use ongoing formative assessment to drive my instruction for each student in my class				
			D6. Ability to adjust assignments in order to meet student's learning needs based on feedback and formative assessment(s)				
			D7. Ability to eliminate or compact curriculum material that students have already mastered				
			D8. Ability to provide opportunities for acceleration when student(s) demonstrate mastery of content				
			D9. Ability to provide tiered assignments based on student readiness				
			D10. Ability to assign differentiated homework based on student's individual needs				
			D11. Ability to use flexibly grouped students by readiness/ability in my class				
			D12. Ability to Provide students with opportunities to work with other students who have similar interests and abilities				
			D13. Ability to use direct instruction strategies (lecture style)				
			D14. Ability to use inquiry-based learning strategies (learning by discovery)				
			D15. Ability to use cooperative learning strategies				
			D16. Ability to use portfolios to assess student learning				
			D17. Ability to use rubrics to assess student learning				
			D18. Ability to use performance-based assessments to assess student learning				

Appendix A (continued)

D19. Please use this space to provide additional input relating to differentiation strategies you would like to learn more about or have a particular strength in that you would be willing to share.

Appendix A (continued)

**Professional Development:**

In the table provided, please indicate your interest level, how often (frequency: none, once, once per week, once per month, once per year, etc.) and amount of time (duration: number of minutes/hours/months/years/lifetimes....) you would be willing to commit to each type of personal development types listed below. If you are interested in participating in other professional development opportunities that are not listed below please add them in the additional spaces provided.

Interest level			Type	Frequency	Duration
H	M	L			
			P1. Individual or Group Action research		
			P2. Individual or Group Presentations		
			P3. Participation in mentoring/coaching		
			P4. Focus/study groups		
			P5. Classroom visits and peer observations/coaching		
			P6. Outside Conference/Workshops		
			P7. Book/Article Reading Groups		
			P8. School visits/observations		
			P9. Other		
			P10. Other		
			P11. Other		

**P12. When are you available to participate in Professional Development? Circle all that apply.**

Before School

After School

Early Release Days

Professional Development Days

Weekends

Winter/Spring/Summer Breaks

## Appendix B

### Survey II

Please do not write your name on the survey; this study is meant to be confidential. Participation in this research study is completely voluntary. When you have completed the survey, please place the survey in the envelop in my mailbox. Check your name off the list on the outside of the envelop. Once all of the surveys have been returned, I will share the results with all who participated.

#### Background Information:

**B1. What grade(s) do you teach? Circle all that apply.**

9<sup>th</sup>                      10<sup>th</sup>                      11<sup>th</sup>                      12<sup>th</sup>                      Mixed Grade

**B2. What is your educational background?**

BA                      BA+                      MA                      MA+                      Multiple MA

**B3. If you have taken graduate level course work beyond a BA, what area(s) have you studied?**

**B4. How many years of teaching experience in the content area you currently teach do you have?**

1-5 years

6-10 years

11-15 years

15+

**B5. Are you a General Education or Special Education Teacher?**

General Education Teacher

Special Education Teacher

**B6. Participation in Professional Development Experiences**

Differentiated Instructional Strategies Book Study

Co-teaching collaboration and planning

None

## Appendix B (continued)

**Priority:** On the left side of the survey I would like you to rate the level of priority of use in your classroom for each element as high (H), medium (M) or low (L). As you rate the priority level of each element, please consider the impact each element has on ensuring access to instruction and the acquisition of knowledge and skills in the class(es) you teach.

**Confidence:** On the right side of the survey I would like you to rate your confidence level in your ability to use various elements of either differentiation or co-teaching as very confident (VC), somewhat confident (SC), somewhat unsure (SU) or very unsure (VU).

Priority of Use			Element of Co-Teaching/Inclusion	Confidence in Use			
H	M	L		VC	SC	SU	VU
			C1. Ability to use many measures for grading student performance is shared between co-teachers				
			C2. Understanding of the curriculum standards with respect to the content area in the classroom is shared by both co-teachers				
			C3. Ability to share instructional materials needed to teach the curriculum between co-teachers				
			C4. Ability of co-teachers to share curriculum resources				
			C5. Ability to modify goals for different levels of students is shared by both co-teachers				
			C6. Ability of both co-teachers in the classroom to agree on the goals of the classroom				
			C7. Ability to move freely about the space in the co-taught classroom				
			C8. Ability to present co-taught lessons				
			C9. Ability to change position/role of co-teachers in the classroom fluidly				
			C10. Ability to use a variety of classroom management techniques together as co-teachers to enhance the learning of all students				
			C11. Ability to share the classroom management responsibilities between co-teachers				
			C12. Ability to establish classroom rules and routines together as co-teachers				
			C13. Ability to plan for class(es) as co-teachers				
			C14. Ability to share planning responsibilities for co-taught class(es) between both co-teachers				
			C15. Ability to plan with co-teacher spontaneously as changes occur during the instructional lesson				
			C16. Ability to easily read the non-verbal cues of the other teacher in co-taught classroom				
			C17. Ability to use humor between co-teachers in the classroom				
			C18. Ability to communicate openly and honestly between co-teachers				

## Appendix B (continued)

Priority of Use			Element of Differentiation Strategies	Confidence in Use			
H	M	L		VC	SC	SU	VU
			D1. Overall understanding of the concepts and components of differentiation				
			D2. Overall ability to implement differentiated instruction in my classroom				
			D3. Ability to use pretests to determine if students have mastered the material covered in a particular unit prior to instruction				
			D4. Ability to use various survey techniques to obtain student feedback on understanding of instruction				
			D5. Ability to use ongoing formative assessment to drive my instruction for each student in my class				
			D6. Ability to adjust assignments in order to meet student's learning needs based on feedback and formative assessment(s)				
			D7. Ability to eliminate or compact curriculum material that students have already mastered				
			D8. Ability to provide opportunities for acceleration when student(s) demonstrate mastery of content				
			D9. Ability to provide tiered assignments based on student readiness				
			D10. Ability to assign differentiated homework based on student's individual needs				
			D11. Ability to use flexibly grouped students by readiness/ability in my class				
			D12. Ability to Provide students with opportunities to work with other students who have similar interests and abilities				
			D13. Ability to use direct instruction strategies (lecture style)				
			D14. Ability to use inquiry-based learning strategies (learning by discovery)				
			D15. Ability to use cooperative learning strategies				
			D16. Ability to use portfolios to assess student learning				
			D17. Ability to use rubrics to assess student learning				
			D18. Ability to use performance-based assessments to assess student learning				

## Appendix B (continued)

**Professional Development Rating:**

In the table provided, please indicate your interest level in participating in ongoing professional development in the future for each type. Additionally, please provide me with your feedback and recommendations for moving forward for the professional development we have completed so far.

Interest level			Type	Feedback
H	M	L		
			P1. Individual or Group Action research	
			P2. Individual or Group Presentations	
			P3. Participation in mentoring/coaching	
			P4. Focus/study groups	
			P5. Classroom visits and peer observations/coaching	
			P6. Outside Conference/Workshops	
			P7. Book/Article Reading Groups	
			P8. School visits/observations	
			P9. Other	
			P10. Other	
			P11. Other	

**P12. Additional feedback or recommendations for moving forward.**

Appendix C

Professional Development Evaluation

**PROFESSIONAL DEVELOPMENT: Co-Teaching Collaboration and Planning**

**OVERALL:**

- Collaboration/planning Quality:  Excellent  Good  Fair  Poor
- Collaboration/planning Content:  Excellent  Good  Fair  Poor
- Collaboration/planning Relevance:  Very Useful  Good  Fair  Poor
- Collaboration/planning Usefulness:  Very Useful  Somewhat  Minimal  Not at all

**OUTCOMES: Through the co-teaching collaboration and planning experience...**

- I gained new information.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- I learned useful strategies.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- I plan to implement information and/or strategies learned through collaboration and planning.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What were the major ideas or concepts learned and how will you apply them in the future?:

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**PRACTICES:**

- A supportive climate of professional collaboration was created.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Opportunities to network and learn from colleagues were supported.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

**FUTURE:**

What would help improve the co-teaching collaboration and planning process/experience more?

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**ADDITIONAL COMMENTS:**

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Appendix D

Professional Development Evaluation

PROFESSIONAL DEVELOPMENT: Differentiated Instruction Book Study

OVERALL:

- PD Quality:  Excellent  Good  Fair  Poor
- PD Content:  Excellent  Good  Fair  Poor
- PD Relevance:  Very Useful  Good  Fair  Poor
- PD Usefulness:  Very Useful  Somewhat  Minimal  Not at all

OUTCOMES: Through the Book Study readings and discussions...

- I gained new information.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- I learned useful strategies.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- I plan to implement information and/or strategies learned.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

What was the major idea or concept learned and how will you apply it?:

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PRACTICES:

- A supportive climate of professional community was created.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
- Opportunities to network and learn from colleagues were supported.
 

Strongly Agree	Agree	Disagree	Strongly Disagree
<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

FUTURE:

What would help improve the PD experience?

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ADDITIONAL COMMENTS:

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