

RESPONSE TO INTERVENTION'S IMPACT ON TEACHERS' PERCEPTIONS AND  
EFFECTIVENESS IN PROVIDING LITERACY INTERVENTIONS  
AT THE MIDDLE LEVEL: A CASE STUDY

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## Dedication

I dedicate this dissertation to my family, who, without them, I could not have completed it. First, I dedicate this to my two amazing daughters Makaela and Mia. When I first entered the field of education, I made that decision so I could help other people's children; however, your births gave my career new meaning. Now, every educational and curriculum decision I make, I make with you both in mind. When lesson planning, I ask myself, "Is this the kind of lesson I want taught to my daughters?" When I sit down with a student one on one, I think, "I hope teachers care enough to do the same for my daughters one day." Finally, when I experienced some challenges in writing this dissertation, what kept me on course was the thought: "If my dissertation could help improve some educational practices, I know my daughters will reap the benefit." Know that you both are always on my mind and because of that; you give me strength and perseverance. I love you more than words can express.

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## **Abstract**

Response to Intervention is the process of identifying students who are struggling, providing increasingly intensive interventions to support students and using data to measure students' responses to the instruction. While RTI has been studied at the elementary level, there is little research existing to support its effectiveness at the middle level. This study was based on one school's RTI pilot program as it assessed whether participating in Professional Learning Communities (PLCs) influenced a four tiered RTI process at the middle level, ascertained which factors contributed to the change in classroom teacher knowledge, practice and efficacy, and examined the impact of the implementation of a four tiered RTI model on student reading progress as evidenced by indicators of student progress. Teacher interviews, group discussions, classroom observations and student reading assessment data were compiled and analyzed through narrative and discourse analysis. The study's design was a formative design experiment that allowed for the study parameters to be modified based on data. The results of this study support working in PLCs while implementing RTI since PLCs encourages the Three Rs: Reflection, Relationships and Results. When these three practices were focused on, they positively impacted teachers' knowledge, practice and confidence. Furthermore, implementing the RTI process also impacted student performance academically, socially and emotionally. Challenges of implementing RTI at the middle level were also presented. Recommendations were made for a state endorsed RTI policy and the rejection of the IQ Achievement Discrepancy model. At the school level, recommendations included the formation of PLC; school infrastructure supports; a formation of an RTI school based leadership team; collaborative and job-embedded professional development for teachers; and encouraged the practice of looping.

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## **Problem and Purpose of Study**

### **Introduction**

Schools and districts throughout the United States and Hawaii in particular, are confronting the challenge of responding to the educational initiative known as *Response to Intervention* (RTI). Initial antecedents of RTI were the Regular Education Initiative (REI) of 1987 and the President's Commission on Excellence in Special Education (2002). These reports revealed that the current special education system places too much emphasis on paperwork and placement and not enough emphasis on instruction and the system takes a "wait-to-fail" approach rather than focusing on prevention and intervention. This refers to IQ-Achievement Discrepancy assessments which do not control for a student's pre-school or educational history (Velluntino, Scanlon, Small & Fanuele, 2006, p.157). There are two major concerns with this kind of assessment: it occurs at one point in time and norm-referenced assessments have inherently low validity since they compare an individual's achievement to that of a normative peer group (Smith, Polloway, Patton, & Dowdy, 2004; Mceneaney, Lose, Schwartz, 2006). It was also noted that the general and special education systems function in isolation rather than working as a unified system, which would benefit all students who experience difficulties (Bender & Shores, 2007; Buffum, Mattos & Weber, 2009). The REI recommended regular education teachers be better prepared to integrate and coordinate services for students who experience difficulty allowing special educators to focus their efforts on the students who need the most specialized and extensive services (Kauffman, Gerber, & Semmel, 1988).

The reauthorization of the Individuals with Disabilities Education Improvement Act (IDEIA) of 2004 allows states to use an alternative to the IQ-Achievement Discrepancy

Model to identify a student with a specific learning disability (SLD). The IQ-Achievement Discrepancy Model is the practice of waiting until students' performance fails to reach their ability level and then, referring students for disability evaluation. By this time, students have experienced difficulties and the practice is reactive rather than proactive. IDEIA (2004) states that a team of specialists, both from general education and special education, must collaborate on reviewing the student's eligibility and indicates that schools may use an RTI approach for identifying students with learning disabilities by offering a systematic approach to providing interventions and evaluating students' responses.

The RTI model is based on a multilayered pyramid model that integrates increasingly intensive interventions at the progressive tiers of instruction. At each tier, assessments are employed to identify students who inadequately respond to instruction and thus require interventions at the next, more intensive layer of the system. Most RTI models have three tiers, but the model for this study has four, based on the needs of the study site and the Georgia Student Achievement Pyramid of Intervention (2008) (Appendix A).

At Tier 1, classroom instruction is geared towards all students using state learning standards. This includes universal screenings to target groups in need of specific instructional support using a baseline assessment to gauge student achievement levels. There are various types of baseline assessments and it is the state or district's decision on which assessment will be used. The assessment, however, must be able to produce a breakdown of areas where the student exhibited success or weakness. Once the baseline data is analyzed, implementation of state learning standards is done through instruction and differentiation of instruction at the class level based on the needs of the student. Differentiation can be done in various ways such as flexible grouping, using multimodal instruction to reach different types

of learners, using leveled texts, etc. Ongoing informal assessments are done three times a year to gauge student performance, and progress monitoring is done frequently to drive instruction (Vaughn, Wanzek, Woodruff, & Linan-Thompson, 2007). At this school site, curriculum-based measurements were created by grade level teachers that assessed the state's learning standards benchmarks. The curriculum-based measurement (CBM) was a set of ten multiple choice questions based on a grade level text and were conducted weekly. Typically, the focus of professional development at this level is the implementation of standards-based instruction and differentiation. If this tier is implemented and is in accordance to state standards and benchmarks, 80-100% of students should be successful at this stage (Bender & Shores, 2007; Buffum et al, 2009; Georgia Department of Education, 2008).

Movement to Tier 2 is determined by data from Tier 1. If students show insufficient progress in their weekly progress monitoring, Tier 2 is initiated. In certain cases, such as vision impairment, movement to Tier 2 may be done immediately and proper interventions are made based on the impairment. In addition to Tier 1, targeted students receive daily small group reading interventions that focus on weaknesses in phonemic awareness, phonics, fluency, vocabulary, comprehension and receive weekly progress monitoring. Using targeted student data, department teams or interdisciplinary teams meet to consider current instructional programs for students who raise concerns in any of the core learning areas, and suggest mandatory tutoring, homework support, etc. (Buffum, et al., 2009). At Tier 2, at least 20 points of data are needed to determine if progress is being made (Bender & Shores, 2007). Data points are various student achievement indicators and should include timely information such as the child's daily or weekly progress based on teacher observations,

formative assessments, or data from progress monitoring (Benders & Shores, 2007).

Interventions are provided in small group instruction with a 1:4 or 1:5 teacher-to-student ratio and provide an additional 30 minutes of reading instruction daily (Vaughn et al., 2007).

If students continue to be unresponsive to interventions used in Tier 2, they progress to Tier 3.

In most three tier models, instruction involves a 1:3 teacher-to-student ratio 45 minutes to 60 minutes a day (Vaughn et al., 2007). The interventionist at Tier 3 may be a specialized reading teacher, a special education teacher or some other support member trained for intervention. At this tier, data analysis is more in depth and intensive. Whereas Tier 2's supplemental activities were designed to strengthen targeted skills, Tier 3 employs more diagnostic testing and formative assessments such as the Stanford Diagnostic Reading Test, to discover the reason(s) for an individual student's difficulties (Georgia Department of Education, 2008). Once this tier is initiated, at least four data points are needed. While the lengths of intervention may vary, most cases occur over a six to twelve week period. A student support team (SST) meets to determine if special education referral is needed towards the end of Tier 3 and if so, special education testing begins (Fuchs & Fuchs, 2007a).

In a three tiered RTI model, those students who don't exhibit progress are then referred for special education testing and if they are found eligible, they receive these services in Tier 3. However, in a four tiered model, at the end of Tier 3, SSTs can determine if the student needs to receive special education services which constitute Tier 4. If a student does not meet special education eligibility, they may remain at Tier 3 and continue the intense interventions. Tier 4 is developed for students who need additional supports and meet eligibility criteria for special program services. If a disability is detected, additional

services are needed and Individualized Education Programs will be created based on prior interventions.

With the weight of responsibility in providing interventions shifting from solely the special education program to that of both the general and special education programs, issues concerning implementation must be examined. What needs to be investigated is how this shift of practice affects those who are responsible for instruction-general education teachers and special education teachers and their effectiveness in providing these interventions, particularly, interventions in literacy. In a four tiered RTI model, instruction in tiers 1-3 is provided by general education teachers and support is given by the special education teachers in lesson planning, generating interventions, working with small groups, among other tasks. Throughout RTI, struggling students remain in an inclusion setting. Special education services occur at tier 4, once a child meets special education eligibility.

The primary area of difficulty for many students being referred for special education services is in reading, thus many children get labeled as having a “learning disability” (LD) as a result of their inadequate reading abilities. Stanovich’s (1986) theory of the “Matthew Effect” in reading posits that children who start off poorly in reading become even more disadvantaged in comparison to other readers. These students do not acquire the reading skills at the same pace as their peers and as the progression of instruction leads to more challenging texts, this further exacerbates the comprehension and reading problems these children experienced originally. Identification of LD typically occurs at fifth grade (Fuchs & Fuchs, 2007a) and most students do not receive the intensive intervention they need until they are nine-years of age, at which time they finally qualify for special education (Lyon, 1998). If children are diagnosed with a specific developmental delay, such as a speech,

vision, hearing or medical disability prior to the start of school, special education services are available and provided; however, a learning disability cannot be identified until students begin school. As such, identification (for specific learning disability) will be delayed due the fact that students must be exposed to some level of curricular content in order to have a valid measure of their achievement. A student's disability must adversely affect his/her academic performance before he/she is eligible to receive special education services. Since reading acquisition is at the early stages in kindergarten and first grade, most reading difficulties are not noticed until later and then a pattern of failure needs to be noted for the IQ-Achievement Discrepancy model to be implemented, further delaying identification and interventions.

Reading proficiency continues to be a great concern across the nation. IDIEA (2004) and the No Child Left Behind legislation (2001) mandate the delivery of what the federal government identifies as "scientifically based reading instruction" to students in the primary grades (kindergarten through 3<sup>rd</sup> grade), ongoing assessments to monitor student progress, and "highly qualified" teachers to implement the instruction (USDOE, 2001). NCLB's scientifically based reading instruction was based on the controversial and much critiqued recommendations of the National Reading Panel ([NRP], 2000) which incorporates phonemic awareness, phonics, fluency, vocabulary and comprehension and culminated in the development of the Reading First Initiative (NCLB, 2001). This initiative focuses on providing a core basis for literacy at the elementary level.

Since reading instruction is already a major focus due to NCLB's Reading First Initiative, there has been an increasing number of studies regarding identifying struggling students, designing and implementing interventions and the effectiveness of RTI at the elementary level (Fuchs, & Fuchs, 2006; Fuchs & Fuchs, 2007a; Torgensen, Alexander,

Wagner, Rashotte, Voeller & Conway, 2001; Vaughn & Fuchs, 2003; Vaughn et al., 2007; Vellutino et al., 2006). Because RTI is employed as an early identification, prevention and intervention tool, more research is done regarding RTI at the K-3 level than other grades. Thus, RTI is more commonly used in elementary schools and not as often in middle or high schools. With RTI being implemented more at the elementary level, educators are now examining how RTI can be initialized at the middle level to offer more support.

### **Statement of the Problem**

The current system for addressing the needs of our struggling readers in the United States is ineffective (Buffum et al, 2009; Pikulski, 1994), even more so at the middle school level. While many educators are giving their best effort, the infrastructure of our educational system is preventing students' weaknesses from being identified early and by failing to provide support for both the student and the educator. The first problem occurs when students' literacy weaknesses are not identified and addressed at the elementary level; not all students are identified and some get mislabeled. At the middle level, most teachers are not trained in reading acquisition (since many hold a secondary education certification) and therefore cannot provide adequate interventions. This is further exacerbated by the IQ-Achievement Discrepancy model that requires students to wait until they fail to enter special education to receive individualized academic services for students with Specific Learning Disabilities (SLD).

Several authors believe that if interventions are successful at the primary stage, the number of students experiencing reading difficulties at the middle level should decrease (Bender & Shores, 2007; Buffum, et al., 2009; Fuchs & Fuchs, 2007; Vaughn & Fuchs, 2003). However, from 2001 to 2005, as students reached the 8<sup>th</sup> grade, the National

Assessment of Educational Progress (NAEP) scores continued to show significant decline in reading (Tankersley, 2005). More specifically, in 2009, NAEP reported that 67% of Hawaii's 8<sup>th</sup> graders scored at or above the basic reading level, with only 22% scoring proficient and 1% at the advanced level (NAEP, 2009). With 33% below the basic reading level, many students had not received adequate literacy interventions. While this is just one indicator of achievement, these test scores indicate that students' literacy skills are not growing at the rate expected by the federal government. In fact, on the 2009 NAEP reading assessment, Hawaii's average score was 255, lower than the national average of 262 (NAEP, 2009).

With the consistent decline in test performance in the middle grades, middle level teachers particularly, need to make sure they can effectively reach and teach early adolescents who are struggling in reading. Criteria for general and special education teachers are set by NCLB's Highly Qualified Teacher (HQT) status, but HQT is met simply if a teacher has a certification in the field they are teaching, have been through a licensing program or has enough professional development credits in the field they are teaching. According to the NCLB, all teachers must be "highly qualified" (2001), however, the definitions of "qualified" are widely debated. What is considered "qualified" for one setting or scenario may not be "qualified" for another.

To compound this issue, standardized state reading tests are administered in 8<sup>th</sup> grade and teachers are faced with the issues of getting non proficient readers to pass a test well above their ability levels and to focus curriculum on passing the test rather than the individual students' needs (Meier, 2004).

The obstacle for providing adequate reading intervention at the middle school level is that teachers may not have the content knowledge needed to provide the interventions. Most states rely on teachers with secondary education certifications (7-12) to fill middle level positions. This is done on the premise that middle schools, like high schools, are separated into content areas. In Hawai'i, secondary education licensures require the college student to major in a content area and then pursue a teaching certification in that field (University of Hawaii at Manoa, College of Education, 2008); however, if a student majors in English and then pursues a secondary education certification, reading acquisition courses are not needed. Reading acquisition courses are primarily taken when teachers are receiving elementary education licensure. When a student experiences rudimentary gaps in literacy such as phonemic awareness, secondary certified teachers often face their own challenges in providing quality instruction. Vellutino, Scanlon, Small, and Fanuele (2006) found that instructional deficits are more prevalent than biological hindrances in causing reading difficulties in students.

If effective interventions are implemented in the general education classes, students would receive assistance before they fail and/or are referred for special education services. Unfortunately, lack of content and intervention knowledge coupled with the IQ-Achievement Discrepancy model has led many educators to mistakenly (but with best intentions) place too many students in special education for reading difficulties (Buffum et al., 2009; Spear-Swerling & Sternberg, 1996). Furthermore, if there is a lack of discrepancy between IQ and achievement, students may not receive the services they need. The IQ-Achievement Discrepancy model often waits for a student to fail academically before diagnosing a specific

learning disability, thus, gaining the moniker, the “wait to fail” approach. The U.S. Department of Education (2005, cited in Buffum et al., 2009) argues:

There are reasons why the use of the IQ-discrepancy criterion should be abandoned. The IQ discrepancy criterion is potentially harmful to students as it delays intervention until the student’s achievement is sufficiently low so that the discrepancy can be achieved. (p 3)

Currently, general education programs are quite distinct from special education programs, both instructionally and financially. Often times, teachers feel that students need to be labeled in order to receive the special services they deserve and traditionally, special education teachers were the experts in specialized instruction (Soodak & Podell, 1996; Spear-Swerling & Sternberg, 1996). Fuchs and Fuchs (2006) point out, however, that RTI is designed to prevent long-term academic and social failure, rather than designed to prevent special education placement. The assumption that prevention and intervention should only be provided by special education teachers is erroneous and RTI is a process that requires both regular and special education programs to provide services to struggling students, those with and without labels.

When compared to providing instruction in a fully inclusive model, teacher efficacy suffers more when general education teachers refer struggling students for resource services that occur in alternate settings (Goodman & Webb, 2006). Kauffman, Gerber and Semmel (1988) also noted that teachers may possess the content knowledge, but are constrained by limited time and other instructional resources, leading teachers to doubt their own abilities. Moreover, special education placement tends to stabilize reading growth in students with reading disabilities rather than advance it. In an analysis of students being served by special

education in grades 3-6 in Texas schools, Hanushek, Kain, and Rivkin (2002) found that test performance raised only 0.04 standard deviations per year. Based on the students' scores at the entry points of their special education programming, it was estimated that resource programs would improve performance by 0.1 SD or a movement of 3-4 percentile points (p.592); however, they did not meet that estimation. This study reported that referring struggling students to special education resource programs may help struggling students maintain their achievement on tests, but not close the gap in relation to their non-struggling peers. Especially regarding special education pull-out resource programs, the result of this study can be attributed to special education teachers having schedules that require the concurrent service of groups that are too large or too heterogeneous for efficient and effective targeted instruction (Denton, Vaughn & Fletcher, 2003, p. 204). Scheduling and large caseloads can prevent educators from providing interventions consistently and assessing the results.

While most of the research on RTI focuses on grades K-3, previous research suggests that RTI and reading interventions hold promise for providing assistance to struggling readers at the middle level before they continue to fail (Allington, 2006; Spear-Swerling & Sternberg, 1996; Vaughn & Fuchs, 2003). There is also a lack of research regarding teacher efficacy and professional support in providing reading interventions to struggling students at the middle level.

### **Significance of the Topic**

In relation to the Matthew Effect (Stanovich, 1996), RTI holds promise of adequately identifying students who are struggling and developing appropriate interventions early, since students with reading difficulties often read less and fall even further behind compared to

their peers' achievement (Stanovich, 1986). Furthermore, RTI provides a framework of interventions that would support teachers at the middle level in providing and implementing interventions. Finally, educators hope that inappropriate referrals for special education services would decrease due to the diligence of the general education teacher and the RTI team in providing the different tiers of intervention. Those special education students who respond well to RTI can be reassessed to determine if they were inappropriately diagnosed.

A national survey (Hoover, Baca, Wexler-Love, & Saenz, 2008) was mailed to directors of special education programs in each of the State Departments and the District of Columbia, soliciting feedback about the RTI process in the respective states educational systems. Of the 51 surveys mailed, 44 were returned and of those returned, sixteen states said they were planning on implementing RTI, and 28 were already implementing RTI. Of those 28 states already implementing the process, 17 states said that less than ten percent of their schools implemented RTI, 11 states reported 10-25% implementation, four states reported 26-50% implementation and only one state had implementation in over 75% of all the schools. Twenty-four of the respondents stated that RTI would be used for the purpose of making instructional decisions and for determining special education services and placement in their states for students with SLD.

At the time of this study, several of Hawai'i's schools were considering adopting RTI, the study site being one of them. The state requested technical assistance support from the National Center on Response to Intervention (NCRTI, 2009) to incorporate RTI within the state's Comprehensive System of Student Support (CSSS). The CSSS is defined as a system that assists administrators, teachers, and others in the delivery of timely, appropriate programs and services to all students (HIDOE, 2009). The CSSS model was based on the

research of Dr. Howard Aldelman and Dr. Linda Taylor, co-directors of the School Mental Health Project at the University of California, Los Angeles (HIDOE, 2009). The model allows schools to examine curriculum, assessments, instruction, and various supports to benefit student learning. A state level RTI leadership team met in December 2008 and provided feedback on the proposed changes to the CSSS policy which incorporated RTI. At the time of this study, the policy was being reviewed for approval by the Hawaii State Department of Education (NCRTI, 2009). While the state of Hawai'i did have an RTI framework in CSSS, the state was still using the IQ-Achievement Discrepancy model for eligibility (Storm, 2009).

### **The RTI Pilot Program**

There is compelling evidence for researching the implementation of RTI at the middle school level. While RTI seems like a viable solution for school and student improvement, at this time of the study, it had not been implemented in any middle schools in this particular district in Hawai'i. One middle school in Hawai'i, Aloha Middle School had decided to pilot RTI. This particular middle school's reading performance was average at best. The school average on the Hawaii State Assessment Test in 2008-2009 for 7<sup>th</sup> grade was 315 compared to the state average of 314, with 300 being the cut-off score for "Meeting Proficiency" (HIDOE, 2009). Only 11% of students with disabilities met proficiency. Eighth grade students fared slightly better, scoring an average of 317 compared to the state's average score of 314. Only 9% of students with disabilities met proficiency. Teachers had expressed concerns about the reading abilities of both their special education and regular education students. Coincidentally, the special education population at the school study site had reached 10.4% (HIDOE, 2008), in comparison to the national average of 13.6% (USDOE,

2008) and the state average of 11.7%. Compared to the national average, the school had a lower special education population percentage, but it had also not met NCLB's Adequate Yearly Progress in reading (HIDOE, 2009) due to the special education subgroup. Finally, the school regained autonomy one year prior to the RTI pilot program and was in its first year without the mainland educational curriculum provider. This provider supplied the assessments, target student data and curriculum recommendations. Since the provider left, the administration and teachers designed an assessment and professional development plan, which involved using the data from the assessments to strengthen curriculum, to use in lieu of the curriculum provider. The teachers and administration asserted that instructional decisions needed to be managed at the school level and be made based on the expertise of the teachers rather than by a for-profit company.

The assessments that were designed were multiple choice questions based on the state's performance standard benchmarks. There were four questions for each benchmark and the assessments were given bi-monthly and questions were randomized. The assessments were only ten questions and corrected immediately, giving students prompt feedback and offering teachers a glimpse into which questions and benchmarks were the most challenging for students at that point in time. Teachers then determined if they needed to go back and re-teach certain benchmarks or, if the benchmark had not been taught and students performed well, teachers could adjust their instruction plans.

At Aloha Middle School, RTI had not been implemented prior to the 2009-2010 school year. The school assembled an RTI cadre which included general and special education teachers, counselors, administration, and a behavioral health specialist. It was the cadre's task to evaluate the current status of their school and determine what steps were

needed in creating an RTI process for Aloha Middle School and pilot it. The cadre found that approximately 10 students were referred annually based on academic needs and evaluated for special education services in grades 7 and 8 for the first time in their educational careers. Approximately 45 students were re-evaluated and in 2008-2009 in particular, 17 students were rescinded from special education. While these numbers were not overly alarming, the failure rate was high in comparison to general education students and test score achievement was low for the struggling and special education students. The RTI cadre felt a four tiered RTI plan would best suit Aloha Middle School's needs.

In order for RTI to be successful, teachers must see its value and success and in order to do that, general education teachers must feel supported in implementing interventions. Support may be provided through professional learning communities, instructional coaching and professional development.

### **Statement of the Purpose**

If the RTI process provides schools with a protocol for professional development and support needed to render effective reading instruction, it could not only impact the lives of our students and teachers, but impact the education practices of middle schools who adopt RTI. If RTI could be successful in a middle school of this size, it could serve as a model for implementing RTI in other middle schools. With such an undertaking, the purpose of this study was to examine the impact of the implementation of a four tiered RTI model on student reading progress; assess if participating in Professional Learning Communities influences the RTI process; ascertain which factors contributed to the change in teacher knowledge, practice and confidence, if any; and contribute to the body of research currently available on the implementation of RTI and its effects on student reading proficiency.

## **Review of Literature**

### **Introduction**

Response to Intervention (RTI) is an evidence-driven approach to providing early interventions for struggling learners in general and special education settings by providing effective instructional practices based on learner needs, monitoring student progress and adjusting instructional decisions by analyzing results (Bender & Shores, 2007; Buffum et al., 2009; Fuchs & Fuchs, 2007). At the forefront of educational reform are efforts to enhance struggling learners' academic growth by providing a multi-tiered approach of interventions whether the student has a special education designation or not. RTI shows promise in addressing the concerns about traditional special education identification procedures (the IQ-Achievement Discrepancy Model), the disproportionate representation of minority and disadvantaged students in special education, the integration of general and special education, and the delivery of evidence-based programs to students (Bender & Shores, 2007), and to reduce federal spending on special education services.

This chapter will (a) outline the history of the Response to Intervention approach, most specifically, the four tiered model, (b) compare a four tiered RTI model to a three tiered model, (c) discuss how professional learning communities are important to the design, implementation, and professional development of those teachers utilizing RTI, (d) explicate how teacher confidence and efficacy affects classroom practice, and (e) suggest evidence based literacy instruction interventions that have been shown to positively impact student growth in older students who exhibit reading challenges.

## **Response to Intervention**

The concept of student responsiveness to intervention in order to determine special education eligibility began in the 1970s with Bergan's (1977) behavioral consultation study and Deno and Mirkin's data based program modification (1977) (in Bender & Shores, 2007). Both studies identified the specific student weaknesses (one in behavior referrals, the other in skills), set measurable goals, and developed an intervention plan based on the student's achievement level. Bergan's study involved an intervention team to analyze student data and monitor progress of individual student behavior in comparison with the student's peers. Goals would then be set specific to the student's needs. Deno and Mirkin's study used curriculum-based measurements (CBMs) which are frequent short assessments as a basic intervention protocol to determine if students are meeting benchmarks (Buffum et al, 2009). All students received the CBMs as part of their daily instruction to gauge progress which drove instruction and interventions. Both studies were not confined to specific tiers (in the RTI sense), but rather used on-going checks and assessments. When these studies proved successful, more research on CBMs was conducted among professional organizations and two approaches to RTI have emerged as being effective: the "problem-solving approach" based on Bergan's work and the "standard treatment protocol" based on Deno and Mirkin's study. While these studies were concerned with behavior rather than academics, they did prove that a tiered approach can be successful.

The problem solving model bases decisions on the needs of individual students and provides more flexibility in terms of resources and interventions; however, this model is more time consuming than the standard treatment protocol and it relies on teachers and team members to have expertise in research-based strategies (Bender & Shores, 2007). This

approach was used by the Heartland Area Educational Agency in Iowa which reported a significant reduction in special education placement rates among kindergartners through third grades (Grimes, Kurns & Tilley, 2006). A team looked at the gaps between the expected and actual level of individual student performance. Measures were taken to determine whether or not inappropriate instruction was the cause for this gap and assessment data was used to determine specific weaknesses. The team then developed a plan of interventions based on the student weaknesses and needs. Once the plan was implemented, ongoing progress monitoring was used to determine the interventions' effectiveness. Finally, the team gathered data to assess if the student was responsive to the intervention and determined what the next plans were. Overall, there was a 41% reduction in special education initial placements in kindergarten and 34% reduction in special education placements in first grade (Tilly, 2003). The schools that chose to participate were given support in the form of additional personnel such as school psychologists, educational consultants, social workers, etc. Another crucial component of Heartland's model was the intense professional training. Teachers were trained in research-based practices, team building, data collection, analyzing data to drive instruction and problem solving.

The RTI interventions in a standard treatment protocol model occur in a natural progression from tier to tier. This model outlines a clear process for strategies and assessments and sets standard interventions that can be readily available for all struggling students. Standard treatment protocol models have been shown to be effective because they standardize the interventions and once the process has been determined by the school, success is not dependent on teachers who may have uneven training in providing interventions (Fuchs & Fuchs, 2007a). Some interventions may come from scripted

programs, or what the federal government deems “scientifically validated curricula” for RTI as determined by the No Child Left Behind legislation (2001), which are aimed at addressing effective reading instruction. The interventions may also come from teacher designed curriculum, but more commonly are prescribed by commercial programs that claim to support RTI. Depending on what the schools use, interventions strategies and practices will be dependent on the curriculum and as such, will vary among schools. While there are many curricula that can be used, the strategies need to match the weakness the student is exhibiting. The weakness with this model lies in the lack of flexibility since most students receive the same instruction based on the generalized weakness. Students are grouped by their weakness and a common intervention will be implemented. Since most of the schools utilizing RTI have a specific curriculum attached to their RTI process, most studies using standard treatment protocol assess the effectiveness of curriculum programs or research-based strategies specific to that school or district. Such standard treatment protocol model studies include Duffy’s (2006) study of Long Beach Unified School District’s use of *Language!* as a third tier intervention (cited in Buffum et al, 2007), *Success for All*, and the *Winston-Salem Project* as Tier 1 or core interventions (Pikulski, 1994), and the more grass roots approach of the *Promoting Literacy in Urban Schools* (PLUS) project (Haager & Mahdavi, 2007).

The Heartland Area Educational Agency in Iowa (1990) identified several “operational challenges” involving the problem-solving approach using a four tiered process and shifted to using a three tiered model. The Georgia Student Achievement Pyramid of Interventions (2008) has reported success using a four tiered model by using a hybrid of the problem-solving approach and the standard treatment protocol to solving student learning issues.

In the National Implementation of RTI survey mentioned previously, 13 of the 44 states that responded were using a problem-based approach; only one was using a standard treatment protocol model and 24 of the states were using a combined approach (Hoover et al, 2008). Fuchs and Fuchs (2007) also found a combined approach to be most effective, using standard treatment protocol for academic difficulties and problem-solving approach for behavioral problems. However, since motivation and classroom behavior have a correlation to classroom and academic performance, interventionists may need to employ both approaches with certain students. Using a combined approach allows educators more flexibility in decisions (problem solving approach), while at the same time utilizing an organized approach of instruction (standard treatment protocol).

#### **The Four Tier Model versus the Three Tier Model**

This study intends to evaluate if the RTI process is effective in supporting teachers in their efforts to instruct struggling readers and how teachers feel in terms of designing and implementing reading interventions using a four tiered model. While most RTI models have three tiers, the tiers can be modified. One such model that is included in the research is the *Georgia Pyramid of Intervention*, which has four tiers (Appendix A). Aloha Middle School's RTI team decided to base their RTI process on this model. The school chose this model because it offered more steps in the intervention process before referring a student for special services. It also clearly lays out the support provided at the different tiers. While the model is based on the *Georgia Pyramid of Intervention*, the curriculum at Aloha Middle School is based on the Hawaii State Performance Standards, *Advancement Via Individual Determination* (AVID) strategies and teacher content knowledge. AVID strategies are

research based strategies used to promote writing, inquiry, collaboration and reading among students and the strategies are used as part of daily instructional practices for the entire class.

Aloha Middle School’s Tier 1 and 2 interventions are the responsibility of the general education teachers. Tier 1 consists of a curriculum based on the Hawaii State Content Standards and occurs within the classroom. Tier 2 involves many strategies that revolve around differentiation, more focused reading instruction and small group learning. These strategies are offered to every child in the school who is struggling with academic work. Tier 3 of the pyramid is driven by the Student Support Team, which is comprised of teachers, specialists, a psychologist and other support staff, and involves another set of educational interventions. The levels of interventions get increasingly intensive as the tiers progress. Finally, Tier 4 is implemented after an eligibility referral has been made based on students’ lack of progress in Tier 1-3 and placement into special education services are provided. All tiers involve ongoing assessment to monitor progress made, or lack thereof, as a result of the implemented intervention. This model differs from the typical RTI model because it has an extra tier and offers one more level of interventions and support.

Table 1

*RTI Models*

Three Tiered RTI Model	School Study Site’s Four Tiered RTI Model
Tier 1: <ul style="list-style-type: none"> <li>• Universal screening</li> <li>• Standards driven core curriculum that embeds ongoing monitoring for all students.</li> <li>• Progress monitoring</li> <li>• Differentiated instruction</li> </ul>	Tier 1: <ul style="list-style-type: none"> <li>• Universal screening</li> <li>• Standards driven core curriculum that embeds ongoing monitoring for all students.</li> <li>• Weekly progress monitoring</li> <li>• Differentiated instruction</li> </ul>
Tier 2: <ul style="list-style-type: none"> <li>• Student identification process</li> </ul>	Tier 2: <ul style="list-style-type: none"> <li>• Student identification process</li> </ul>

Table 1. (Continued) RTI Models

<ul style="list-style-type: none"> <li>• SST decision making process Immediate and targeted interventions systematically applied</li> <li>• Progress monitoring</li> </ul>	<ul style="list-style-type: none"> <li>• Coaching and PLC member consultation</li> <li>• Immediate and targeted interventions systematically applied in small groups within general education classroom</li> <li>• Progress monitoring</li> <li>• Parental involvement</li> </ul>
Tier 3:	Tier 3:
<ul style="list-style-type: none"> <li>• Diagnostic or additional assessment</li> <li>• SST decision making process</li> <li>• Intensive interventions focused on closing the gap</li> <li>• Progress monitoring</li> <li>• Special Education testing</li> </ul>	<ul style="list-style-type: none"> <li>• Diagnostic Assessment</li> <li>• SST decision making process</li> <li>• Instructional accommodations focused on closing the gap</li> <li>• Progress monitoring</li> </ul>
	Tier 4:
	<ul style="list-style-type: none"> <li>• SST decision making process</li> <li>• Special education eligibility process</li> </ul>

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(Buffum et al, 2009)

The theory behind having a Student Support Team is an essential part of all RTI models. RTI is based on collaboration of team members, which consist of teachers, counselors, coaches, psychologists, and support staff, in order to make sound decision on what interventions to implement, who will be implementing them and also in assessing the results of the intervention. The collaboration occurs among different people at the different tiers but the same decision making process is employed at each tier. The decision making process for Aloha Middle School was also based on the Georgia Department of Education's SSTAGE (Student Support Team Association of Georgia Educators) (Figure 1). The collaboration that occurs is a cyclical process that examines the problem that is occurring with the student, develops a plan, implements the plan and then assesses if the plan is achieving the desired results. If the students are unresponsive to the planned intervention, the cycle begins again with new interventions in mind. As the student moves through the RTI

process, the problem solving team composition varies slightly, however the cyclical process of planning and evaluating the interventions remains the same.

While no one person is an expert in all areas, many people have expertise in certain areas. By combining efforts and knowledge, not only do the students benefit from this systemic and collaborative process, but the teachers do as well (Buffum et al, 2009).

### **Professional Development through Professional Learning Communities**

With RTI being relatively new to schools, the learning curve for teachers will be high. While teachers need to undergo continue professional development for RTI, professional development is most effective when it is collaborative, ongoing and job-embedded (Clark & Hollingsworth, 2002; DuFour, DuFour, Eaker & Many, 2006; Hord & Sommers, 2008; Thibodeau, 2008; Wayne, Yoon, Zhu, Cronen & Garet, 2008). The nature of the professional development is important and directly tied to student achievement, teacher knowledge, skills and self-efficacy. Professional development on various curricula is needed (Fuchs, Compton, Fuchs, Paulsen, Bryant & Hamlett, 2005) in order to implement Tier 2 and while the curricula might be readily available, the professional development on implementation is not. If teachers are using a scripted RTI curriculum program, they have to ensure that their instruction is in accordance with the implementation guidelines. If teachers are using interventions created by school based problem solving teams of SSTs, they need to make certain interventions are done in a timely manner and done effectively.

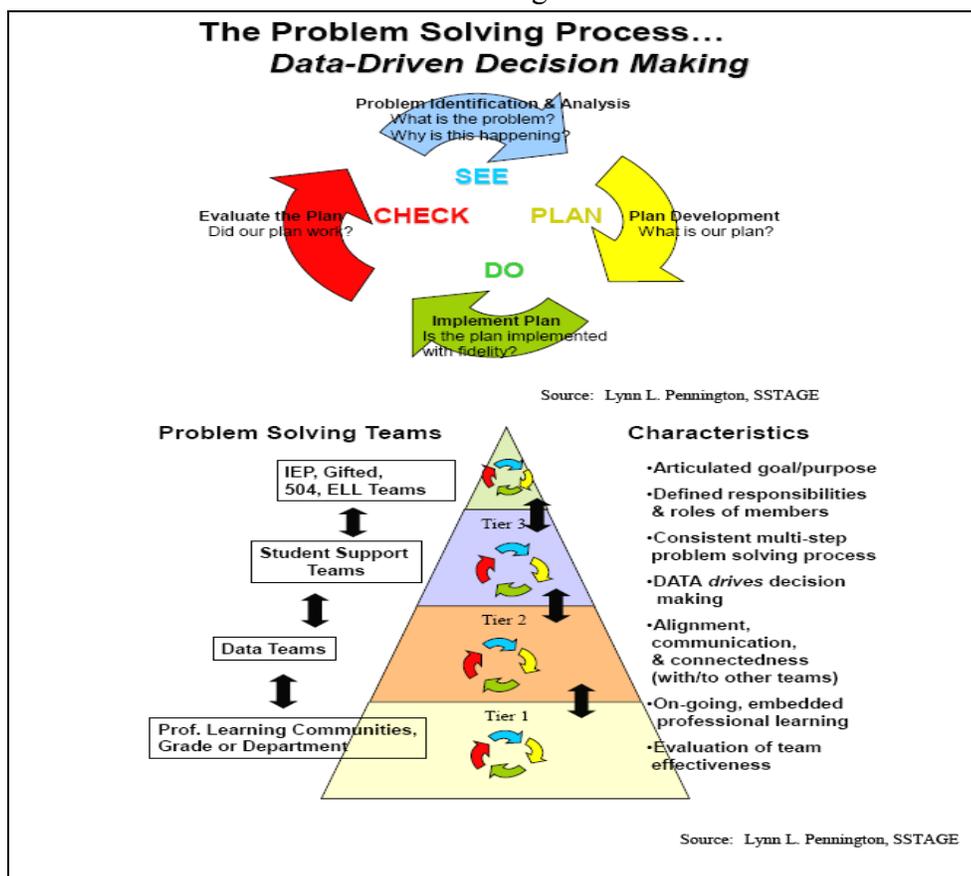
When collegial learning occurs for a common goal, the group can be considered a professional learning community (PLC). PLCs are defined as:

...*collaborations* [which] represent a systematic process in which teachers work interdependently in order to *impact* their classroom practices in ways

that will lead to better results for their students, for their team and for their school (Dufour et al, 2006, p. 3).

As evidenced in Figure 1, PLCs are utilized in the Georgia RTI model and it is essential for teachers to work together for RTI to be successful. In order to define what constitutes Tier 1 in a school, a PLC of grade level or content teachers must first collectively determine what the learning outcomes must be at each level based on the state's learning standards. The collaboration involves analyzing, synthesizing, and prioritizing data in a way that allows teachers to work towards a common goal.

Figure 1. SSTAGE's Data Driven Decision Making Process



(Georgia Department of Education, 2008)

There is little research on how PLCs affect RTI, but numerous studies show how PLCs support instruction and result in improved student achievement. In the Reynoldsburg

City School District, teachers worked collaboratively with the “No Blame, No Shame, No Excuses” mantra and used data to devise three types of math intervention programs. Due to the efforts of the teachers, their intervention program and instructional strategies, 7<sup>th</sup> grade math performance scores increased from 58% in the Spring of 2006 to 78% in Spring 2007 (Olverson & Ritchey, 2007).

The core characteristic of a PLC is the attention to student learning success (Hord & Sommers, 2008). In a PLC, all are encouraged to participate in creating the vision and to keep it foremost in their minds while planning with colleagues, learning best practices together and from each other and delivering instruction in the classroom (Buffum et al, 2009; DuFour et al., 2006; Hord & Sommers, 2008). The significant factor in sustaining the growth of the PLC is that the conversations, learning and professional development are continuous.

Most professional development consists of episodic workshops aimed at teacher mastery of an area that has been seen as a deficiency in the school or district. These short-term professional development programs have shown little success in terms of bringing about sustained school improvement or effective teacher professional growth and it has been demonstrated that ongoing professional development is best (Clarke & Hollingsworth, 2002; Thibodeau, 2008; Wayne et al., 2008). In a traditional model of professional development, ongoing professional development would be problematic, since it would require the teacher to be out of the classroom on regular school days and would be disruptive to student learning. As a result, Hawley and Valli (1998) and Joyce and Showers (2002) recommend that professional development should be “school based” and “integrated into the daily work of teachers” (cited in Wayne et al., 2008).

Coaching has been seen as an effective way of providing job-embedded, individualized professional development. Ideally, the coach is there to help with the revision process (Mednick, 2004, p. 3). Coaches help teachers to reflect on their practice-on what is going well and on what changes they should make. Through classroom observations, coaches can take field notes to provide data to teacher's on classroom occurrences, offer suggestions on improving instruction and offer professional development avenues that occur on within the school work day.

This is significant in terms of preparing teachers for the RTI process. While schools may purchase scripted curriculum programs to provide interventions, non-scripted intervention plans can be equally effective (Denton et al., 2003). Effective non-scripted programs will require more teacher preparation than a scripted one that comes with a preplanned scope and sequence. Teachers must be coached on providing systemic, explicit instruction of interventions and see reading acquisition as a developmental process (Denton et al., 2003; Spear-Swerling & Sternberg, 1996).

Job-embedded professional development is beneficial for many reasons. The first of which relates to the relevancy and purpose of teacher learning in relation to what truly occurs in the classroom. Johnson (1996) presented a case for re-conceptualizing teacher professional development as “opportunities for learning” to enable it to be “embedded into the ongoing work of the school” (cited in Clarke & Hollingsworth, 2002). Teacher learning is aligned with the direction of the school's improvement plan. Furthermore, job embedded professional development allows teachers to reflect on their classroom practices since teacher learning is directly influenced by student progress. Schon (1983) found that job-embedded professional development allows teachers to be “reflective practitioners.” Finally, because

job-embedded professional development is conducted at the local level, teachers collectively have the opportunity to take charge of their own professional development by identifying needs and weaknesses. Job-embedded professional development gave them a feeling of ownership and control that led to higher motivation, and greater chances for the strategies learned to be implemented in the classroom (Dufour et al, 2006; Thibodeau, 2008). An example of a PLC coming together occurred in Amherst, Massachusetts. At Amherst Middle School, a team at the school effectively piloted the reading comprehension strategies described in *Mosaic of Thought* by Ellin Oliver Keene and Susan Zimmerman (cited in Mednick, 2004). The team used strategies in all subject areas for student exhibitions, which they were piloting at the same time. The pilot was so successful that science and math teachers went on to use the strategies more intensely department-wide (Mednick, 2004, p.8).

The job-embedded approach also proved to be successful when done in collaborative settings. In order for PLCs to exist, learning is not done in isolation, but rather learning is a collective effort. Teachers have reported that they were able to solve problems more effectively and efficiently during the course of a year because they benefited from collective knowledge, expertise and experience of the group (Haager & Mahdavi, 2007; Raudenbush et al, 1992; Thibodeau, 2008).

Collaborative professional development groups also prove to be constructive because they build collegiality and provide teachers the comfort to take instructional risks. Due to the levels of support PLCs provide, they encourage teachers to take these instructional risks. Mednick (2004) reported in Vikan Middle School in Brighton, Colorado, teachers felt less threatened and more comfortable with sharing their work, gradually became more willing to

try new strategies and reflect upon how it went. Teachers were able to take a theory or idea and get adequate support to implement it. Clarke and Hollingsworth (2002) report:

...to experiment with innovative teaching strategies, the encouragement of collegial discussion and the structural provision of opportunities to share and reflect on each other's practices are all facets of the change environment that act to afford or constrain teacher growth... (p. 955).

Since the field of education is dynamic, innovation is necessary.

### **Teacher Confidence and Efficacy**

When evaluating teacher confidence levels, self-efficacy must be taken into consideration. Self-efficacy, defined by Bandura as “the belief in one’s capabilities to organize and execute the courses of action required to manage prospective situations,” has become a crucial factor in teacher education and educational reform (1995, p.2). Teacher self-efficacy refers to the teachers’ beliefs about their ability to influence student outcomes and can be categorized into two types: outcome expectancies and efficacy expectancies (Wheatley, 2001). Outcome expectancies are teachers’ beliefs about the influence specific teaching and strategies will have on students, and efficacy expectancies are teachers’ beliefs in their own capabilities to implement the actions (Soodak & Podell, 1996). Both areas of efficacy have been found to influence choice of activity, effort exerted, perseverance in difficult situations and feelings about performance (Newman, 1999; Raudenbush et al., 1992, Timperley & Phillips, 2003; Wheatley, 2001).

Teacher knowledge is one variable that affects both outcome expectancies and efficacy expectancies. Haager and Mahdavi (2007) posit that lack of knowledge leads to lower efficacy. Hansen (2005) found that English teachers displayed greater levels of

positive self-efficacy towards traditional subject tasks and competencies that they had more knowledge on, than towards more non-traditional subject tasks. As teachers received more professional development and had more experience with the new tasks, their positive self-efficacy and confidence increased. This is significant because RTI was a new initiative for some, and background knowledge may have been lacking and in order to improve teacher knowledge, professional development was needed.

Hoy (2010) purports that teacher self-efficacy and self-confidence relates to collective efficacy and trust in colleagues. Collective efficacy is defined as shared perceptions of teachers in a school and that the collective effort by the entire faculty will have positive effects on students (Goddard, Hoy, & Woolfolk, 2000). In order to implement RTI at the school-wide level, teachers must feel the school, collectively, can be successful in putting it into action. Likewise, for PLCs to function effectively, all members must work and learn together, and in order to be invested in the PLC's work, collective efficacy and confidence in members is needed.

### **Literacy Intervention at the Middle Level**

In RTI, struggling students are identified using a baseline assessment, but what to do next with the information can be daunting, especially for those teachers who do not have experience in teaching reading. Even determining what the student's specific weakness is can be problematic since many children have multiple reading deficiencies by the time they reach the higher grades (Biancarosa, 2004; Moats, 2001; Roberts et al, 2008). As a result, the student will require multiple interventions. To compound the problem, students who struggle with reading, experience a greater lag in motivation than students who read on grade level (Allington & Cunningham, 2006), which makes instruction more challenging. Even

with waning standardized test scores, schools that provide targeted reading interventions have raised reading levels in older students as many as two grade levels (Joyce, Hrycauk & Calhoun, 2001; Moats, 2001). While there are a variety of curricula programs that claim to support RTI, their quality may vary and are often a prohibitive expense. This becomes more problematic at the middle and high school levels because there are fewer programs to choose from, they may not be manageable with large student populations and time to implement the programs is an issue.

Schools do not need to purchase a curriculum program for interventions to be successful; most interventions may begin at the five core areas of reading which are: a) phonemic awareness, (b) phonics, (c) fluency, (d) vocabulary, and (e) comprehension (in Allington & Cunningham, 2006; Roberts et al, 2008; Tankersley, 2005). Reading is holistic and proficient readers use all these areas simultaneously, but through diagnostic testing, specific weaknesses can be identified and targeted. While the intervention must match the students' level of reading development, it must also match each stage of growth. Even though these skills may be rudimentary, instruction for older students cannot be since it will demean them and further lessen their motivation.

Most secondary students have a reasonable proficiency in phonemic awareness and phonics (Moats, 2001). If students exhibit poor decoding skills, sound drills may not be beneficial. Older students benefit from more instruction in advanced word study that involve continued work on phonemic relationships, syllable patterns and morphemes (Moats, 2001, Roberts et al, 2008). Strategies such as phonemic activities in the form of games; identification of speech sounds through finger tapping; teaching syllable and spelling patterns through activities such as word sorts; morpheme activities such as word building with roots,

prefixes and suffixes are all practices used to foster word study in older students. The Northern Lights School District had success using the Picture Word Inductive Model with their 4-12 grade struggling readers (Joyce et al, 2001). This model included classifying words and developing phonetic and structural principles through picture and word associations.

Some students exhibit difficulties with word automaticity. Miscue analysis can help educators determine the types of words students struggle with most. Most students who do word by word reading do not yet read words with enough fluency to facilitate comprehension (Biancarosa & Snow, 2004; Denton et al., 2003). Students can speed up their reading by doing sound symbol association, quick speed drills of confusable syllables, oral reading, and having an increased amount of reading practice with books within the students' zone of proximal development (Allington & Cunningham, 2006, Moats, 2001; Williams, 2001).

Typically, older students who struggle with vocabulary have heard many words but lack the specificity of written word knowledge and make poor word associations (Moats, 2001). Teaching vocabulary is more than memorization, but the traditional practice of providing daily word lists related to the content students are studying is still effective (Roberts et al, 2008). Word study should be linked to subject content area in order to build specific word knowledge (Moats, 2001) and promote the transfer of skills. Strategies such as Word Links, a physical method of having students pair up to form different word associations is recommended for older students. Professional development will consist of vocabulary building strategies such as how to explicitly teach context clues, strategies for teaching prefixes, suffixes and roots, graphic organizers such as the Frayer Model or bubble maps to support word association.

All the previous areas lead to comprehension, but in terms of building comprehension, mere exposure to texts is not enough. Students need direct and explicit comprehension instruction which involves (a) comprehension strategies, (b) monitoring and metacognition instruction, (c) teacher modeling, (d) scaffolded instruction, and (e) apprenticeship models (teachers engaging students in content-centered learning relationships) (Biancarosa & Snow, 2004). Throughout instruction, teachers should ask probing, open ended questions. Fischer (2003) recommends framing questions that move through the levels of thinking from literal recall, then to translations and finally interpretations. This progression helps students build base knowledge of a text enabling them to move to a deeper understanding of the text.

Students also benefit from collaborative learning. When working in small groups, students should not simply discuss a topic, but rather interact with each other around the text (Allington & Cunningham, 2006; Biancarosa & Snow, 2004; Daniels, 2002). Learning is decentralized in these groups because meaning is drawn from the text and negotiated through a group process (Biancarosa & Snow, 2007). Fuchs and Fuchs (2000) implemented a program called PALS or Peer Assisted Learning Strategies in which students, through paired reading activities, served as coaches and tutors to one another. This strategy involves partner reading and retelling, paragraph shrinking (identify the most important information in each paragraph to build a summary) and doing a prediction relay. Typically this activity takes 40 minutes to implement and has had proven results on comprehension assessments if done at least three times per week (in Williams, 2001).

Throughout the RTI process, there must be multiple formative or diagnostic assessments to determine if the interventions are working. Assessments vary based on what

assessment series schools choose. Aloha Middle School used teacher created multiple choice questions based on state standards as formative assessments, American Institute of Research (AIR) quarterly state standards test, Gates-MacGinitie Reading Test (GMRT) and running records as diagnostic assessments. If there is an inadequate response to various targeted interventions, there is an assumption that a deficit exists, preventing the student from reading, not an instructional malady and referral for special services should be made (Vaughn & Fuchs, 2003). This would eliminate the subjectivity in the referral process when we rely solely on teacher referral which may result in biased student data, inequalities in types of students being referred and in potentially missed cases (Speece, 2005).

Once a student has exhibited a weakness in any or all of the above areas, interventions can be put into place and this tends to occur in Tiers 1 and 2. Further interventions will occur in a small group setting or on a one-to-one basis in Tier 3.

### **Theoretical Framework**

Spear-Swerling and Sternberg (1996) purport that reading acquisition is a sequential process of developmental phases in which the cognitive processes most crucial to reading acquisition change over time (p. 80). Literacy educators have moved towards viewing reading difficulties from a broader transactional perspective situated in variable social and cognitive contexts (Mceneaney, Lose & Schwartz, 2006). These contexts may include, but are not limited to the individual (medical and emotional), the individual's membership within certain groups and institutions, and social, economic and cultural backgrounds which all interact in order to create processes or products of learning. While most educational researchers agree there is a sequence of reading acquisition, Spear-Swerling and Sternberg (1996) recognize varying factors influence cognitive development and thus, affect reading

acquisition. There is an interactive perspective, rather than focusing on just extrinsic or intrinsic perspective. Children will enter certain phases, but their development is influenced by instruction, among other variables, such as home literary environment, support from family, intrinsic motivation and others. Because this theory takes the interactive perspective into account, it acknowledges that students can go off track developmentally for a number of different reasons.

In the past, readers who experienced difficulties were associated with specific brain dysfunction. Process deficit models of disability grew out of this view, but relied on an information-processing perspective that regarded the flow of information as proceeding along a dual route to meaning acquisition (Mceneaney et al, 2006). The dual route theories divided cognitive processes between visual and phonological processing, without investigating how the two routes are inherently linked and how they support each other in cognitive development. When a breakdown in one or the other of these processing systems occurred, an intrinsic deficit perspective contributed to the designation of a label such as “learning disabled.” In contrast, Spear-Swerling and Sternberg’s theory of cognitive developmental reading stages take into account the natural variability of readers. Knowing the specific cognitive characteristics of each reading development phase is more important and productive than simply knowing the diagnostic categories of reading.

In addition, cognitive reading development theory better reflects the multifaceted circumstances of the classroom and focuses on what teachers can do to support readers, rather than attribute reading weaknesses to biological deficits. This ideology is crucial to RTI; instead of labeling the student as learning disabled, teachers need to focus on areas of

weakness, provide targeted interventions and expect that all students can learn if given appropriate instruction.

Spear-Swerling and Sternberg believe that reading disabilities stem primarily from word recognition delays. Children in their earliest phase of reading acquisition rely on visual cues to recognize words, whereas children in the next phase use phonetic-cue word recognition. While both phases rely on word recognition, they rely on different contexts to support word recognition. As children progress through phases, words become more complex, yet in later grades, reading curricula focuses less on word recognition than it does on reading comprehension. The progression to a different phase is influenced, in part, by the demands of schooling. For example, in early grades, phonological and word recognition skills are emphasized, but as students proceed to higher grades, the concentration demands shift to reading comprehension. Comprehension skills are the most complex part of reading since they are more holistic, requiring proficiency in the other areas of reading in order to reach a high level of understanding. Spear-Swerling and Sternberg (1996) also note that while the phases of reading development are linked to schooling, it is linked to age and experience as well. Due to the fact that the phases are dependent on the cognitive processing, older students with greater background knowledge, more experience with texts and reference points related to work knowledge will have higher level of comprehension than younger students.

Because each reading phase has different defining features it is important to match instruction to needs. It is not simply a whole language or code emphasis approach, but rather a combination of instructional features to best meet the needs of the phase and of the individual learner's needs.

Table 2

*Phases of Reading Acquisition*

Phase	Defining Features	Approximate Grade	Typical Instruction
Visual-cue word recognition	Child uses visual cues, rather than phonetic cues in word recognition	Preschoolers and some kindergartners	Whole language instruction- get them used to print and symbols
Phonetic-cue word recognition	Child uses partial phonetic cues in word recognition	Kindergarten and first grade	Direct phonological reading instruction and orthographic skills
Controlled word recognition	Child makes full use of phonetic and orthographic cues, but is not automatic in recognizing words	Second grade	Orthographic knowledge (spelling patterns)
Automatic word recognition	Child recognizes common words accurately and automatically	Second to third grade	Whole language instruction- focus on comprehension
Strategic reading	Child routinely uses strategies to aid comprehension	Beginning at third to fourth grade	Comprehension and “fix-up” strategies
Proficient adult reading	Individual has higher-order comprehension skills	Beginning at later high school or college level	Higher order comprehension strategies: schema, analysis, reflection, integration.

Adapted from Spear-Swerling and Sternberg (1996)

The phases of reading acquisition begin with the visual-cue word recognition where children use visuals rather than phonetic cues to help them recognize a word. Once children are familiar with the alphabet and their related sounds or phonetic cues, phonetic-cue word recognition usually occurs and this occurs from kindergarten to first grade. The third phase

is controlled word recognition where students will use phonetic clues and orthographic cues to recognize words. At this stage, students are recognizing some spelling patterns while still sounding out words and this occurs around second grade. From second to third grade, automatic word recognition occurs where students recognize common words accurately and automatically. Proficiency in word automaticity supports reading comprehension skills. Once students enter third or fourth grade, they enter the strategic reading phase, when students are routinely taught comprehension strategies and practice using them. At this stage, they are expected to use a variety of strategies, such as “fix-it” strategies, which may involve looking up unfamiliar words in the dictionary, rereading a passage for meaning, etc. This phase lasts until later in high school and each year strategic reading becomes more sophisticated as the texts become more complex and the tasks required of the students become more challenging. For example, students are asked to synthesize two expository texts to create a research paper or analyze an article for the author’s bias. The final phase is proficient adult reading, which usually begins later in high school or in college. This phase requires the reader to have higher-order comprehension skills with an integration of schema (Spear-Swerling & Sternberg, 1996).

Spear-Swerling and Sternberg’s (1996) model also accounts for how students get “off track” during these reading acquisition phases. Between visual-cue word recognition and phonetic-cue recognition, students do not progress and are “nonalphabetic readers.” They have limited letter-sound knowledge which forces them to rely on symbols. At the phonetic-cue word recognition phase, struggling students can be “compensatory readers” and rely on sentence context to assist with word recognition. Before they can reach the controlled word recognition phase, students can plateau and be “nonautomatic readers.” They may have

accurate, but nonautomatic word recognition that hinders comprehension. They tend to spend more time trying to recognize the word than focusing on meaning or context. At the automatic word recognition stage, “delayed readers” may recognize words, but not quickly enough to assist in reading comprehension at this level of education. They may not have been ready for comprehension instruction when it was delivered and have impaired strategy use. Off track readers below the strategic reading phase are considered to be reading disabled (RD). For those who do not progress past the strategic reading phase, they become suboptimal readers. These readers fall short of the highest levels of comprehension.

This reading acquisition model is helpful in providing a starting point to base initial interventions. As mentioned previously, reading learning disability (LD) is often attributed to gaps in instruction and learning (Spear-Swerling & Sternberg, 1996). Once diagnostic tests are done, interventionists can distinguish at which cognitive phase the student is functioning and offer appropriate interventions. What complicates providing interventions at the middle level is the large span of the strategic reading phase. This phase stretches over many years and content. Because these phases are based on cognitive development, they are appropriate for providing interventions for all struggling readers, regardless if they are labeled learning disabled or reading disabled or not. A student cannot move past to a higher cognitive level without proficiently using cognitive processes indicative of the initial phases.

Understanding the phases of reading development is important for this study because students at the middle level have reading levels that vary from controlled word recognition to highly proficient reading. Students may exhibit weaknesses in a certain skill, but due to age and past experiences, cognitive levels are higher for middle school students. This will assist

in providing developmentally appropriate interventions while still targeting specific reading weaknesses.

Spear-Swerling and Sternberg's research is based on mostly middle-class English-speaking youths, and they acknowledge that cognitive stages of reading acquisition differ to some extent across cultures. For example, phonological awareness is not crucial for learning to read logographic language such as Chinese, in which the written symbols dictate meaning of words rather than sounds (p. 90). In spite of this, different writing systems did not seem to cause large differences in the rates in which student learn to read. Considering that Hawaii has a large Asian influence, this is also important to consider in determining which intervention and approaches to implement.

### **Summary**

In conclusion, RTI has proven to be effective when research based targeted interventions are implemented (Denton et al, 2003; Fuchs & Fuchs, 2007a; Vaughn & Fuchs, 2003). Teachers do not need to purchase "scripted" programs to provide quality interventions. Rather, they can work collaboratively to learn about research based interventions, plan team-wide implementation, monitor progress and make curricular decisions together. Interventions also need to be based on students' cognitive and developmental stage when deciding which instruction is needed to support reading acquisition. Torgensen et al. (2001) implemented two models of explicit instruction of word-reading skills and the students made significant gains in standard decoding and comprehension scores that persisted two years after the conclusion of the intervention. The success was attributed to explicit instruction, emphasis on basic on basic reading skills,

intensity and small group size. All of these demonstrate how influential teachers and targeted interventions are in the RTI process.

## Research Design and Methods

### Research Design

**Formative and design experiments.** This research utilized formative and design experiment methodology. While the methodology is novel, it was named because the approach incorporates two fundamental principles:

- (1) The work of research using this approach is fundamentally to design an instructional intervention that works to achieve a valued pedagogical goal in an authentic classroom.
- (2) Doing so implies modifying the intervention formatively in response to data suggesting factors that enhance or inhibit the intervention's effectiveness, efficiency, and appeal. (Reinking & Bradley, 2008, p.15)

The model links research with practice and continually uses research to provide evidence on how effective the implemented interventions are.

A mixed methods approach best suits formative and design experiments. Qualitative data are needed because this approach to research falls clearly into what Salomon (1991) has called systemic rather than analytic research (Reinking & Bartley, 2008, p. 22). Formative and design experiments focus on how contextual factors influence the effectiveness of interventions and look at variables in cause and effect relationships rather than simply looking at results. In traditional evaluation models, data are needed to establish a benchmark against which progress might be measured in assessing the effectiveness of an intervention or instructional practice (Reinking & Bradley, 2008). The intervention tends to be “frozen” without weighing other variables in wake of the intervention's success or failure (The Design-Based Research Collective, 2003, p.7). There are some concerns with randomized

experimental trials, especially when the treatment is “frozen” and cannot be modified for contexts other than what the researcher envisioned or experienced.

Furthermore, the research is based solely on the summative effects of the intervention which, more often than not, tend to be quantitative. While formative and design experiments are concerned about the effectiveness of an intervention, they use qualitative data to investigate the complexity in developing knowledge and skills, the roles teachers play and the context of the educational setting. The concern with “frozen” or randomized trials is that the intervention cannot be easily applied or adapted to differing contexts. Using the qualitative data to examine results directly applies to educational practice and improved theoretical accounts of teaching and learning (The Design-Based Research Collective, 2003). As a result, formative and design experiments often utilize mixed methods. While the quantitative data may reveal concrete results of statistical comparisons or pre/post observations of the interventions, the qualitative data will explain how the results were achieved and the type of work that was involved.

Educational researchers agree that defining a design experiment may vary (Barab & Squire, 2004; Cobb, Confrey, diSessa, Lehrer, Schauble, 2003; The Design-Based Research Collective, 2003; Reinking & Bradley, 2008). Each design experiment may differ based on the needs of the designer, the contexts in which the intervention is employed and the refinement of the intervention. The Design-Based Research Collective (2003, p.5) proposed that in order for formative and design research to be valuable and bridge the credibility gap in educational research, it must have the following characteristics:

1. The goals of designing learning environments and developing theories are intertwined.

2. Development and research take place through continuous cycles of design, enactment, analysis and redesign.
3. Research on designs must lead to theories that can be shared with other educators by communicating relevant implications and successes.
4. Research must account for how designs function in authentic settings going beyond reporting failure or success by focusing on interactions that help us understand how the result came to be.
5. Development of accounts relies on methods that can document and connect processes of practice to the results.

This research framework fits the study because the RTI model did not have strict parameters, but it desired to create theory to apply in the future. Since it is a pilot program, some flexibility was needed in the data collection process to determine if teachers felt RTI was a supportive and effective measure in providing interventions. Constant assessment and revision of intervention plans were needed in order to personalize the instruction to the students' particular needs. Also, since student indicators change based on the particular student and intervention, there was no universal process to RTI. The pilot program was occurring at a school, an authentic setting, rather than in a laboratory. Finally, the success or failure of this program needed to be studied to determine if it can be implemented school-wide.

While the formative and design experiment approach links research and practice, it differs from action research. Both research models address instructional goals and both have a realistic view on the existence of variability in the research contexts, but they differ in issues of power and theory development due to the collaborative and iterative nature of

formative and design experiments. Ideologically, action research is a means to empowerment and freeing oneself from certain limitations (Arhar, Holly & Kasten, 2001). Limitations include, but are not limited to curricular mandates, teaching versus administration power issues, and social constructs imposed upon teachers. Formative and design experiments also lead to professional empowerment, but not particularly in an emancipating manner. Also, in action research, the teacher, or group of teachers acting as a research cohort, assumes the role of the researcher, whereas in formative and design experiments, teachers and the researchers are viewed as a research team. Theory development in action research is also secondary in the fact that action research tends to test theories under certain circumstances in order to emancipate the researcher or to put theory into action (Cohen, Manion & Morrison, 2000; Reinking & Bradley, 2008). Formative and design experiments take into consideration that general theories may not fit well within the complexity of teaching and learning in classrooms. The purpose of bringing researchers into the classroom is to promote collaboration with teachers in order to create theories of teaching and learning in the classroom. However, instead of having set criteria and theories to test, they expect to create, refine and modify theories in the course of their work. (Reinking & Bradley, 2008).

Formative and design experiments foster collaboration. There is a partnership between the researcher and the teacher in the planning and preparation of the study, the information gathering, the interpretation and representation and in the reporting and use of the results. The researcher is primarily responsible for articulating the purpose of the study, coordinating the research, suggesting strategies to use, gathering the agreed upon information, presenting the initial findings for analysis and writing the study. The classroom

teacher helps negotiate the terms of the study, suggests and implements appropriate strategies, mutually interprets research leading to the final analysis and edits personal accounts that are used in the written version of the research. The benefits of the research are shared among the researcher and teacher and to some extent, the students; however, these benefits vary in purpose. For example, all stakeholders benefit from learning, but these benefits may impact the careers of teachers and researchers differently.

Collaborating alleviates some of the concerns of issues of power, privilege and authenticity that have been noted as problematic when researchers work in the classrooms (Reinking & Bradley, 2008). The researcher is no longer an outsider observing, but rather a partner in curriculum planning. The teacher is no longer a passive participant being observed, but rather the co-creator of the study. In a formative and design experiment, the researcher works with teachers to set pedagogical goals, makes instructional decisions to accomplish the goals, helps determine progress or weaknesses in the implementation of the intervention, and reflects on the accomplishments (Reinking & Bradley, 2008).

This approach is also appropriate for this study since RTI is about assessing interventions and students' responses to them in terms of literacy development. Formative and design experiments investigate explicitly and directly how to improve education and learning in authentic educational settings by providing an instructional intervention (Reinking & Bradley, 2008). Since I was the school's instructional coach, I participated in the PLCs and provided professional development on literary interventions. As such, my role as a researcher may have been problematic because I was the deliverer of the professional development and also a collaborator in the PLCs. This design, however, allowed for me, as the researcher and coach, to offer more input and suggestions in intervention and curriculum

choices, while conducting the research. It also contributed directly to educators' need to find effective instructional options but also to provide specific professional development about how to implement the interventions which aligned with my role as researcher and instructional coach. This design links research and practice, and researcher and teacher.

Aloha Middle School used a combined RTI model (problem-solving and standard treatment protocol), and pathways to implementing interventions were different among varying student cases, with diverse teachers and in the assorted classrooms. Formative and design experiments allow for some adaptation because:

the approach to an intervention that is implemented at the beginning of an investigation may be substantially different by the end of the investigation because the main goal of the research is to adapt the intervention to make it work better in response to the inherent variability within classrooms.

(Reinking & Bradley, p.20)

An intervention may have some general components, but throughout the research, the intervention may be modified to improve its performance. Because interventions must be studied in an authentic environment, there are naturally occurring variables that affect the implementation of the intervention. Instructional responses to these variables must be addressed in a natural, logical way, and explained in the research. Since RTI is an intervention process that occurs within the classrooms, this research design aligned with the purpose of my study. The RTI model at the study site was partially based on a problem solving approach and interventions varied.

There are some challenges researchers face when using formative and design experiments. The first is objectivity. Designed-based researchers tend to find themselves in

the dual role of the implementer of the instructional approach and researcher. Triangulation of multiple sources and kinds of data (thus the mixed methods approach) can help determine intended and unintended outcomes. Difficulties also arise from providing interventions in authentic scenarios. A single intervention may be discussed among researcher and teacher many times per week; unpredictable events may occur that disrupt implementation and/or interventions may need various adaptations based on the individual students. Addressing the causality may be difficult to determine, which makes meticulous data collection critical. The validity of formative and design experiments has been called into question, but the collaboration between educator and researcher can help avoid any misinterpretation of data. Finding collaborative partnerships is also problematic. Because formative and design experiments are collaborative and tend to be longitudinal, finding participants who are willing to open their classrooms, modify practices and work along with the researcher is difficult. Finally, while this goes beyond the scope of a single study, a challenge for design-based researchers is ensuring the results are used appropriately. The study should not imply that this intervention can be applied in other contexts and expect the same results.

**Case study.** A case study is defined as a specific instance that is frequently designed to illustrate a more general principle, where the single instance is a bounded system (Cohen et al, 2000). Case studies have been used in formative and design experiments since case studies can give more insight on the conditions under which the theory applies. A case study was used because the RTI process varies among different schools. Assessing the effectiveness of RTI was specific to Aloha Middle School and the processes, assessments and curriculum they used.

Case studies in particular, offer researchers a bounded system to establish a cause and effect relationship and show how it varies among participants (Cohen et al, 2000). By garnering more in-depth information from a smaller number of participants, it allows researchers to come to generalizations through investigating the complexity and dynamic nature of interactions in a common instance (Cohen, et al, 2000).

Case studies also enable researchers to get ‘thick description’ (Geertz, 1973) of participants’ thoughts, perceptions, beliefs and experiences. Because of this, case studies can represent the discrepancies or conflicts between the viewpoints held by participants, which is valuable in analyzing data and in ensuring the reliability of the study (Cohen, et al, 2000).

**Binding of the case.** While researchers can make theoretical statements based on case studies, these studies need to be bound by specific and identifiable criteria (Merriam, 1998). Cohen et al (2000) suggest they be set in the following ways: (a) are temporal, geographical, organizational, institutional, and other contexts that enable boundaries to be drawn around a case; (b) defined with reference to characteristics of the individuals and groups involved; and (c) defined in participants’ roles and functions within a case (182). The participants of this study are teachers who belonged to one school, who belonged to an interdisciplinary team (their PLC) and who were piloting the four tiered RTI model at the school. In the following section, I describe how I selected the participants, the setting, the duration of study and my role as the researcher as a way to bind the case.

Using one school for the case study will be done to minimize confounding variables in the study. Generally, the larger the sample, the more representative it is (Cohen et al, 2000). However, Wayne et al (2008) argue that using teachers as units of assignment require

fewer participating schools because there will be fewer variables to deal with such as curriculum, school duties, schedules, and support staff. It will also give a greater level of precision because if all the participants are working with the same curriculum, school duties, scheduling and support, commonalities can be more easily determined. Randomization among participants and their variables can lead to less reliability in the data analysis and correlations. Since this is a formative and design experiment, variables that arise will be discussed in the research.

### **Research Questions**

This study sought to answer the following questions:

1. How does implementing a Response to Intervention process within a Professional Learning Community influence teacher knowledge, practice and confidence regarding struggling readers?
2. How does the implementation of a four tiered Response to Intervention model impact student reading achievement as evidenced by indicators of student progress?

### **Data Collection Methods**

**Interviews.** Ten teacher participants were interviewed three times throughout the course of the school year regarding key concepts related to RTI and reading interventions. All interviews preceded the students' quarterly assessments for the purpose of gathering data on teacher instruction and their feelings about the levels of RTI support before performance reports came out. This was done to exclude the students' scores as an influence. Conducting three interviews allowed me to see if and how teachers' perceptions of the RTI process changed as the school year progressed. The conversations occurred in teachers' classrooms or in a location of their choice to ensure comfort. There were open ended questions on: (a)

their feelings and experiences conducting the RTI pilot program; (b) the extent of professional development and their evaluation of the professional development they are receiving as a result of participating in the PLC and from the coaching; (c) identification of struggling students; (d) interventions they are implementing and their results; and finally, (e) their confidence in providing secondary reading interventions. Follow up questions were asked for further clarification if needed. Transcription of the interviews happened in a timely manner to formulate questions for the following interview. Initial interview questions are in Appendix B.

**Group discussions.** As mentioned previously, the participants belonged to a team which constituted their PLC. They met at least once a week to discuss student issues, analyze student data, and plan advisory lessons, plan enrichment activities and work on strengthening core curriculum. In order to observe how participants interacted in a professional learning community to identify struggling students, suggest interventions and evaluate the worth of the RTI process, I videotaped one initial informational session and three PLC/team meetings during the 2009-2010 school year. Group discussions and PLC meetings occurred within a two week window of the quarterly formative assessments in order to discuss student data and progress.

As discussed earlier, PLCs involve collaborative learning and goal setting based on data. The purpose of using these meetings as data is to determine the level of collaboration amongst the team of teachers and if this affected teacher knowledge, practice and efficacy in RTI.

**Classroom observations.** The agendas for the observations were based on the instructional decisions made in the PLCs. Classroom observations took place to gather data

on how the teacher was implementing the intervention; the setting and the condition under which the intervention was taking place; and how the student(s) were responding to the intervention. Observations allow researchers to gather ‘live’ data rather than getting it second hand (Cohen et al, 2000). While in the classroom, I took field notes. Data was collected on explicit instruction, how the intervention was implemented, time-on-task, and student work.

Formative and design experiments allow researchers to be a collaborator with the teacher on the intervention implementation, thus I took on the role of the ‘participant-as-observer’ and interacted with the teacher and students during the observation (Cohen et al, 2000). Because the researcher becomes an “agent of change” (Reinking & Bradley, 2008, p.79), some situations warranted me to become more involved in accomplishing a specific goal, while other situations necessitated a strict observer role. Since the study was a formative and design experiment, the observations were semi-structured: there was an agenda of issues to observe, however, the field notes collected did not always adhere to the agenda and revealed additional issues to explore.

**Student assessment data.** To measure whether students are responding to the intervention or making progress, student assessment data were collected, reviewed and analyzed. Aloha Middle School used the Gates-McGinitie Reading Test (GMRT) to determine the national stanines of the students and their grade level equivalencies (GE) as baseline data, as well as Reading Renaissance’s STAR test for Accelerated Reader (AR). The STAR test also provides grade level equivalencies to be used in conjunction with the AR program. Fuchs and Fuchs (2007) recommend that students who score below a norm-referenced cut-point of 25percentile should be progress monitored for five weeks in order to

be considered for RTI. These tests were then repeated at the end of the year to assess achievement progress. This data also included Aloha Middle School's quarterly assessments. The quarterly assessments were designed by the American Institute of Research (AIR) and administered in each class three times throughout the year at the end of the academic quarter. The assessments were based on the Hawaii Content Performance Standards. Further data came from the weekly Improvement Checks (ICs) which were done in all content areas. Improvement checks were created by the content departments at each grade level and were multiple choice questions based on the Hawaii Content Performance Standards and the vocabulary associated with the benchmark. These were short (6-10 questions) formative assessments based on the content's Hawaii Content and Performance Standards (HCPS). Students monitored their own progress by charting their scores and improvement in a line graph. Finally, student work samples, most notably constructed responses based on the content area benchmarks, were collected and used in analysis of student progress.

The array of data collected were used as a focal point in the interview and group discussions. Teachers were asked to analyze the data and assess if RTI was positively affecting students' reading achievement and if the PLC and the professional development had been effective in creating change in their own practices.

### **Data Analysis**

The data were analyzed for themes using the grounded theory approach as introduced by Barney Glaser and Anselm Strauss first in 1965 and then in 1967 (Charmaz, 2006). Grounded theory is defined as "systematic, yet flexible guidelines for collecting and analyzing qualitative data to construct theories that are grounded in the data" (Charmaz, 2006, 2). In order to do this, as I collected data, I studied, separated, sorted and synthesized

data through coding. Coding is the process of breaking down the data, categorizing it by assigning labels and then using the labels to build themes (Charmaz, 2006; Cohen et al, 2000; Grbich, 2007). From the themes, I then constructed subthemes in response to the research questions.

The interviews were analyzed through narrative analysis with a socio-cultural approach (Grbich, 2007), and by exploring how the teachers' background experiences led them to construct their narratives. Teachers' experiences are told as meaningful narratives. When these narratives are looked at through the socio-cultural approach, analysis goes beyond language structures or plot structures to identify the broader interpretative frameworks that people use to make sense of everyday happenings (Grbich 2007). Even though teachers' interviews were based on assessment data, the emphasis was on the stories behind the data and what led to the results. Many narratives are derived through sequence; one event leads to or influences another. Since the research focused on what experiences led to the teachers' efficacy and belief system, it was important to analyze the content and contexts of these experiences, especially in light of the participants piloting a new process. These experiences were compared in order to find themes. Next, I compared and contrasted the participants' stories to the themes that emerged during the group meeting and the reflections.

The group discussions were videotaped and transcribed. The transcripts were then analyzed through discourse analysis. Discourse analysis was adopted and developed by social constructivists who wanted to explore the organization of ordinary talk and the social actions performed in them. Coyle (1995) defines discourses as "sets of linguistic material that are coherent in organization and content and enable people to construct meaning in

social contexts (cited in Cohen et al., 2000). Language is analyzed “beyond the sentence” (Tannen, n.d.) and used to understand the power relationships in society; how discourse can shape identity; or analyze conversation or interactions.

One objective of this study was to determine how PLCs comprised of teacher teams affected teachers’ perceptions of RTI and in order to do this, how the teachers interacted within a PLC needed to be taken into consideration. According to Searle (1976), much can be learned through analyzing speech acts, particularly illocutionary acts. Illocutionary acts refer to the real, intended meaning of the utterance. For instance, someone’s beliefs can be surmised not only statements, assertions, remarks, and explanations, but also postulations, declarations, deductions and arguments. Intentions are displayed in promises, vows, threats, and pledges. Desires or wants come in the form of requests, orders, commands, prayers, pleading, etc. Pleasures can be seen in congratulations, welcomes and other felicitations (Searle, 1976, p.4). Searle’s taxonomy of speech acts includes five categories. Assertions or representatives are statements that can be proven true or false and they include descriptions, predictions, or speculations. Directives are attempts by the speaker to get the hearer to do something and questions fall under directives because the speaker is eliciting a response. A power difference should be noted in directives because speakers of various positions use directives in different ways; higher status speakers direct, while lower status speakers question or suggest. Commissives are statements which commit the speaker to do some future course of action. Declarations are words that change reality. Finally, expressives share the speaker’s psychological state (1976, p.5).

For the subsequent group discussions that were based on implementing the RTI process (analyzing data, prescribing interventions, determining student response, etc.),

discussions were analyzed using discourse analysis. After the discussions were transcribed, they were analyzed for what the teachers said and how they said it. Because the group discussions focused on student progress, the data were investigated for changes in student performance. The teachers' statements were analyzed to determine if they transformed and changed over time with new knowledge and challenges (Grbich, 2007). This included if the teacher reported being the stimulus for student change or if there were other factors; if there were excuses for lack of performance; side stories that resulted from the process; reflective moments, etc. If the statements changed, it reflected a possible change in the teacher's perception and identity and provided insight on teacher efficacy and confidence levels in themselves and their students. Furthermore, the discussions were analyzed for teachers' speech acts. For the purpose of this study, assertions, directives and expressive statements were analyzed for meaning. Through these speech acts, participants shared information revealing their beliefs, intentions, desires and pleasures, which in turn, gave insight into teacher confidence and feelings towards RTI. Finally, issues of power and identity were also evaluated to determine roles within the PLCs.

With a semi-structured observation, the data were more hypothesis-generating rather than hypothesis-testing (Cohen, et al., 2000, p. 305). Rather than determining if an intervention is effective or not, what is more telling is determining what instructional practices made the intervention effective or not. Field notes were analyzed in conjunction with the student assessment data, in order to see what instructional practices led to increased performance. This included practices like collaborative learning, content vocabulary study, explicit instruction of comprehension strategies, AVID strategies, heterogeneous grouping, etc. The data from the observations were used in Chapter 4 to frame situations, to describe

the implementation of interventions and to recall student responses. Since these were used to build the narrative, unless the observation data were used to exemplify a specific point, they were not cited.

Finally, student assessment data were examined for progress or lack thereof. Assessment data were analyzed on an individual basis. As interventions were put in place, assessment data were compared to data received at the beginning of the year and progress focused on the improvement slope (rate of improvement), rather than simply focusing on proficiency levels.

I examined all participants' data for both consistency and discrepancies (Seidman, 2006). In addition to organizing the data, I checked for rival evidence to explain the findings throughout the data analysis. Researchers can improve the validity of the research by seeking disconfirming evidence and by looking for negative exemplars through the research process (Merriam, 2002). Finally, since it is inevitable that the researcher's consciousness will play a major role in the interpretation of data (Seidman, 2006), I made the findings available to the participants to ensure the reliability and credibility of the findings.

### **Participants**

This research was a qualitative case study of Aloha Middle School utilizing the methods of formative and design experiments as it piloted Response to Intervention. Participants consisted of 10 teachers, five seventh grade teachers and five eighth grade teachers, who agreed to pilot RTI in the school. At least one teacher from each of the different content areas (Math, Language Arts, Science, Special Education and an AVID elective) was represented. AVID was a complex wide initiative that offered professional

development, which provided teachers with strategies to promote study skills, organization, inquiry, reading, collaboration and writing in students across the contents.

The teams had structured meeting times as a PLC to problem solve student issues, analyze student data, and plan advisory lessons, plan enrichment activities and work on strengthening core curriculum. Furthermore, these two teams were AVID teams, participated in professional development on instructional strategies, and were using common strategies across the interdisciplinary teams.

Other participants included the students who experienced the RTI process. Students were identified using baseline data and the first five weeks of progress monitoring in order to be referred to the RTI process (Fuchs & Fuchs, 2007b). Each team had decided to track progress for 4-5 students as the team implemented RTI. While the number was small, the team of teachers felt that in order to learn the RTI process, learn the interventions, keep up to date on the progress monitoring and track students sufficiently, the process could be done with more fidelity if a smaller sample size was used. They were concerned that if the sample size was too large, ensuring effective implementation of RTI may not be possible.

### **Ethical Considerations**

Throughout the study, measures were taken to protect the participants' rights and their confidentiality. All participants were given a consent form clearly outlining the methods that would be taken to protect their rights and the procedures of the study. Participants were asked to participate on a voluntary basis and had the right to withdraw from the study at any time. Confidentiality was ensured through the assignment of pseudonyms to the participants. Member checking (Charmaz, 2006) also took place, especially when some parts of the recorded interview were inaudible. Member checking involves sharing the

interview transcripts with the participants to verify accuracy. During group discussions, all participants were asked to keep what was said private, so participants could feel they can speak freely without retribution. While teacher concerns and requests from the interviews and group discussions were shared with administration and the RTI cadre, the information was shared in order to amend the RTI pilot program and to provide additional supports based on the teachers' suggestions. Regardless of the suggestion or complaint made during the interviews or group discussion, no names or teacher characteristics were provided to administration or the RTI cadre, unless the teacher specifically stated.

Triangulation of sources is recommended in order to compare the reliability of the information collected at different times and from different participants (Patton, 1999). In order to more fully understand the complexities of teacher efficacy in piloting a new process, I triangulated the data collection by using interviews, collaborative discussions, classroom observations and student assessment data. Using multiple methods helped ensure validity by providing multiple examples of correlating data (Cohen et al, 2000).

**Role of the researcher.** Since formative and design experiments requires the researcher to be a participant, the role of the researcher must be examined. The researcher's subjectivity (the researcher's own perceptions and how the perceptions have been constructed) and intersubjectivity (the researcher's reconstruction of the participants' experiences) need to be addressed to acknowledge any bias in the study (Grbich, 2007). Considering my role as the researcher and the literacy coach in the piloting school, I needed to remain tolerant, sensitive to data and try to employ good communication skills (Merriam, 1998), while recognizing my own biases and perceptions to ensure they did not overly

impinge on the study. As mentioned above, the formative and design experiment allowed me to be a member of the PLC and the researcher.

As the school's instructional coach, I was responsible for providing much of the professional development. Based on the needs of the teachers and students, professional development took various forms. First and foremost, it provided the teams with information on RTI, the different tiers, and constructed a formalized process that was supportive to teachers. At Tier 1, professional development was geared towards differentiation strategies and flexible grouping. At Tier 2, professional development involved more assessment measures, focused reading interventions and suggestions for cross content implementation. Considering my role as coach, teachers were used to me being in their classrooms observing and working with students, but my role may have also influenced what the teachers said in the interviews. In order to promote candidness in teachers' responses, I stressed that in order for RTI to be successful school-wide, as a team, we needed to problem solve issues as they arose. Teachers needed to know that as participants, their answers would affect procedures and practices the school embarked on in the future with regard to RTI.

## Discussion of Results

### Introduction

The RTI process provides schools with a protocol for leveled support and data driven curriculum decisions, which are needed for delivering effective reading instruction. Aloha Middle School decided to create an RTI process based on a four tiered model that best suited the school's needs. This endeavor, if successful, would not only impact teachers and students, but could serve as a model for implementing RTI in other middle schools. With such an undertaking, the purpose of this study was to assess whether implementing the RTI process within a professional learning community (PLC) contributed to the change in classroom teachers' knowledge, practice and confidence. It also examined the impact of the implementation of a four tiered RTI model on student reading progress as evidenced by indicators of student progress.

In order for the RTI to be successful, teachers must see its value and success and in order to do that, general education teachers must feel supported in implementing interventions. Support was provided through their professional learning communities, instructional coaching and professional development. At the time of the study, current problems facing Aloha Middle School in implementing the process were the absence of RTI knowledge, process and protocol, the large number of students, administering assessments that accurately target areas of weakness, the bell schedule, and administrative/ curriculum support.

Presented in this chapter are descriptions of the participants, the teacher participants' interviews, student participants' assessment data, observational data and PLC discussion data. Since the study is a formative and design experiment, the study plan was amended

based on teacher feedback and the needs of the students. Changes are noted and explained throughout the chapter.

### **Organization of Data Analysis**

In this chapter, I first present demographic information on the teacher and student participants. Next, I address themes that arose in response to the two research questions:

1. How does implementing an RTI process within a Professional Learning Community influence teacher knowledge, practice and confidence regarding struggling readers?
2. How does the implementation of a four tiered Response to Intervention model impact student reading achievement as evidenced by indicators of student progress?

### **Presentation of Descriptive Characteristics of Participants**

There were 10 teachers, five teachers from a seventh grade team and five teachers from an eighth grade team, who agreed to pilot RTI in the school. At this site, a team constitutes teachers from the four core subjects and two electives who share approximately 120-140 students. At Aloha Middle School, teachers are placed on interdisciplinary teams and separated by grade level. Each team has four core content teachers and two elective teachers, all of whom teach common students. Ideally, these teams form PLCs because throughout the year, they set academic, curriculum, and professional goals that they work towards. They have structured meeting times as a PLC to problem solve student issues, analyze student data, plan advisory lessons or enrichment activities and work on strengthening core curriculum. These two teams were chosen because of their training in differentiation and study skill strategies through an AVID summer training institute and their ability to function in PLCs. Previously, these teachers had experienced researching and reading about new curriculum (AVID), showed interest in implementing new curriculum and

willingly implemented new strategies they learned. Once this was done, they not only brought student samples back to their team, but to the entire school and collaborated on best practices. In choosing these teachers, it was the hope that they would approach the RTI pilot program with the same fervor as they did the AVID program. Table 3 provides the pseudonyms of the teachers, the content they teach and the years of experience.

Table 3

*Demographic Information of Teachers*

Name	Content Area	Years of Experience
Ben (team leader)	7 <sup>th</sup> Grade English/Language Arts	3
Patty	7 <sup>th</sup> Grade Social Studies	10+
Charlene	7 <sup>th</sup> Grade Science	1
Wanda	7 <sup>th</sup> Grade AVID/elective teacher	10+, but only 3 in this subject
David	7 <sup>th</sup> Grade Special Education	3
Kelly	8 <sup>th</sup> Grade English/Language Arts	8
Wailani	8 <sup>th</sup> Grade Social Studies	2
Scott	8 <sup>th</sup> Grade Science	3
Samantha (team leader)	8 <sup>th</sup> Grade Math	3
Barbara	8 <sup>th</sup> Grade Special Education	3

Other participants were students who received support under the RTI process. Teams chose to focus on 4-5 students in order to make the pilot program more manageable. Since teachers needed to learn the RTI process and its components, they felt a smaller sample of students would enable them to implement interventions and monitor students with more fidelity. Students were initially identified using baseline assessment data, but as Table 4 and 5 indicates, teachers expressed there were other areas of concern besides poor academic

performance. A score of 300 indicates grade proficiency on the Hawaii State Assessment (HSA) and the GMRT and STAR assessments indicate the reading level grade equivalency.

Table 4

*Performance Data of 7<sup>th</sup> Grade Students*

Name	HSA Reading Spring 2009	GMRT Fall 2009	STAR Fall 2009	HSA Math 2009	Initial areas of concern as reported by teachers
Jon	292	5.1	4.3	274	Spelling, basic grammar and punctuation, sentence structure. Can make connections when one on one. Communication issues- trouble with abstract issues.
Matthew	259	4.5	4.2	264	Not taking advantage of after school tutoring - shown 1 out of 3 times for M Failing ELA, reading at a 4th grade level May fail Math and may have failed Hawaiian Studies Parents have missed 3 scheduled parent/teacher conferences
Kayla	273	6.7	4.5	268	Does not revise or edit- doesn't see she has an issue. No effort. Does not initiate when she needs help.
Paul	273	5.1	3.5	245	Trouble expressing ideas in writing, overly energetic 7 <sup>th</sup> grade male, social outbursts

Table 5 presents data and teacher concerns for the 8<sup>th</sup> grade student participants.

Table 5

*Performance Data of 8<sup>th</sup> Grade Students*

Name	HSA Reading Spring 2009	GMRT Fall 2009	STAR Fall 2009	HSA Math Spring 2009	Initial areas of concern as reported by teachers
Andrew	301	8.9	8.4	None reported	Does not stay on task, falls asleep, poor handwriting, poor spelling, no organization, no homework done, does not come in for tutoring. Mom is supportive, he is in counseling- no excuse. On an off meds for ADHD- leads to fluctuating motivation. Currently failing 2 classes with a D in another

Table 5 (Continued) *Performance Data of 8<sup>th</sup> Grade Students*

Kate	338	7.9	5.8	None reported	Lack of motivation, does not complete HW on time, poor quality, constant prompting, does not ask for help. No extra credit. Apology letters sent, but no change in performance
Kiana	284	6.4	5.8	None reported	Given up in math, comprehension is poor, too social not enough time on academics. Failing math, barely passing Social Studies
Mike	298	7.9	5.4	None reported	Comprehension- fluctuating performance. Perhaps a communication issue. Language barrier? Home issues. Uses absences as an excuse for not having work. Has an issue with social cues.
Tamara	301	5.8	5.5	None reported	Multiple choice may be a strength. Failed 1 <sup>st</sup> semester and failing 2 <sup>nd</sup> semester. Mom is pushing for her to go into the more challenging classes. Very pleasant, but no work, comprehension issue. -cannot take Advanced Placement classes or geometry- tell mom. Is mom willing to pay for summer school?

**Question One: How does implementing an RTI process within a Professional Learning Community influence teacher knowledge, practice and confidence regarding struggling readers?**

It is evident that implementing an RTI process while participating in Professional Learning Communities influenced teachers' knowledge, practice and confidence regarding struggling students; not strictly struggling readers as the research study first planned to address. Several themes, sub themes and topics arose from the interviews, group discussions, observations and reflections on student assessment data. From the areas of focus: knowledge, practice and confidence, several themes and subthemes arose and these are presented in Table 6.

Table 6

*Themes, Sub themes and Topics from Research Question One*

<b>Areas of Focus</b>	<b>Themes</b>	<b>Subthemes</b>
Knowledge	Response to Intervention Interventions and Modifications Professional Development	Objectives  Interventions and Modifications Data Collection
Practice	Assessments Data Collection Collaboration  Interventions and Modifications Manageability	Identification Feasibility of Documentation With Students With Parents With Other Teachers (PLCs)  Time Requirements Student Caseload
Confidence	In Self In Other Teachers In School Leadership/ Administration	Support  Autonomy Infrastructure

In the following sections, it should be noted that certain quotes were chosen as data to be representative of common themes and the presentation of this data is not equitable in representing the teacher participants. Teachers Ben, Wailani, Kelly, Patty, and Samantha provided more explanations in their interviews and therefore there is more data in the following sections than that of Scott, Wanda or Charlene.

### **Knowledge.**

*Response to intervention.* Of the teachers in this research study, knowledge of the RTI process varied from little or no knowledge (3 teachers), knew some components of RTI (4 teachers), to having studied the theory and process of RTI in graduate courses (3 teachers). Only one of these teachers, David, was on the RTI cadre, and with the exception of him,

none of the teachers were aware of the RTI process designed for Aloha Middle School. All but two teachers, expressed excitement about learning about RTI. Patty and Kelly explicitly stated they were not excited when asked; however, others expressed similar sentiment as Ben when he stated:

I'm excited because I can see how it can be a positive thing and I think that if it is put together in a way that is efficient for the teacher, it can have a really positive effect because I can really see through the data that what I did for this student really worked. (personal interview, September 9, 2009)

It was clear from responses from the first round of interviews that an informational session was needed. This session on January 21, 2010, combined both 7<sup>th</sup> and 8<sup>th</sup> grade teams and offered background information on RTI. The purpose and need for an RTI process at Aloha Middle School was covered in an overview of the four tiered RTI pyramid Aloha Middle School chose to follow, an instructional session titled "How does RTI work?" and a question and answer session (Appendices C and D). A decision making process concerning next steps would conclude the session. The informational session was given by the Vice Principal, the literacy coach (and researcher), and the guidance counselor. The RTI pilot program was presented by the Vice Principal as a "conceptual idea" that would lay out a "protocol" in order to use "data" to help our "struggling students" (video-taped transcript, January 21, 2010). RTI as a "proactive instead of reactive" measure was stressed. When the Vice Principal shared that interventions at Tier 2 were "more individualized support in the classroom," two teachers (Patty and Kelly) were noted to shake their heads negatively (observational data, January 21, 2010). During this informational session, seven of the 10 teachers spoke. At first the questions were detail specific. A talking point from these detail

specific questions revolved around our target students. Patty stated, “I see interventions for academic issues, but only four of my 15 [struggling students] can be academic, but the rest have organizational, behavioral, motivational issues- is it that too?” (video-taped transcript, January 21, 2010). The guidance counselor stated that any struggles should be addressed. David added that some behavioral or motivational problems may be defense mechanisms in order to hide the fact that there are academic weaknesses.

Once teachers understood the concept, they asked to see the process. Wailani asked about a time limit to determine if the interventions were effective, to which I answered that there is no time limit but rather data points. Once data points were collected, a discussion could ensue and a decision could be made. Patty and Kelly also wanted to see what the process was for tracking this data. David, who, as an RTI cadre member, had prior knowledge of these decisions, supplemented that we were working on an online tracking system similar to Google docs, so that all teachers can see what data has been collected and what had been successful. At this point, Kelly added, “That’s my *sh tick* [concern], show me that paperwork, show me the sample.” Patty added, “This happens every year; we talk about things but don’t have anything to work from” (video-taped transcript, January 21, 2010). I then showed them the forms the RTI cadre created (Appendix E) and mentioned that they could be filled out in hard copy, but we were hoping to get an online medium created in order to create a “virtual PLC.” Questions about who would be the point person for this data were then asked. Suggestions were given, but no one volunteered and thus, no decision was made. The technology coordinator was not present, so teachers felt it best to wait until she could inform them on what online options were available. It was also stated that the forms could be amended to make them work better for the team. Team leaders were tasked with being in

charge of gathering team suggestions and bringing the suggestions back to the leadership team.

Clarifying questions were asked in order to differentiate RTI from the current student tracking system that the state already uses, Comprehensive Student Support Services (CSSS). Teachers noted that it was very similar to CSSS. In response the presenters pointed out that this would be more accessible than CSSS and CSSS currently, was just used to track students with special needs at our school. Negative reactions were seen from two of the teachers: Patty and Kelly. Kelly asked, “You are asking us to make IEPs [Individualized Educational Plans] for the 17% of our kids?” (video-taped transcript, January 21, 2010). The Vice Principal answered by saying that action plans, not IEPs would be made, and the action plans were those forms shared. Questions then deviated to address workload. Ben asked, “If I am calling home, will I have to be double documenting this- do I have to write it in our communication logs and these forms?” (video-taped transcript, January 21, 2010). The Vice Principal stated that if it were documented on these action plans then it was proof of communication and no further documentation was needed. Three teachers were noted to be shaking their heads affirmatively at that response.

Before the informational session ended, the question of targeted students came up again. When teachers were suggesting sending a letter home to parents, Kelly advised that we should not include that we were doing this for “Special Education Eligibility” on the parent letter. She was concerned parents would “freak” if they misunderstood the letter and assumed their child was being referred for Special Education services. David, the special education teacher, clarified that “many of these kids won’t be eligible- only 3-4% are actually disabled” (video-taped transcript, January 21, 2010). I further commented to the

teachers that RTI was not a process to determine eligibility but rather to help struggling students.

During the informational session, the Vice Principal spoke the most and made assertions (statement regarding the RTI process), directives (telling teachers what their tasks would be) and declarations (that they had to implement RTI). From the teacher participants, the most common speech act was directives in the form of questions. Ben, Wailani, Patty and Kelly asked detail specific and clarifying questions (directives because it is eliciting the hearer to answer) although some of the questions, especially from Patty and Kelly, were attached to expressive statements (statements and questions that conveyed their doubt in the process) (Searle, 1976). In addition to the Vice Principal, the literacy coach (researcher), David, Ben and Wailani made assertions to explain the purpose and process of RTI. Wailani, Ben, Patty and Kelly made assertions in the form of suggestions in order to improve the process. It was noted that Wanda, Scott, Charlene did not speak at all during the informational session, but took notes.

After the informational session, teachers responded that they knew more about RTI. Ben reported:

Once we figured out what the objectives of the meeting were, it ran much more smoothly. Once we figured out what we were going to do, what forms needed to be filled out- it was very pleasant that we were introduced to the forms before we were given them to fill out. (personal interview, September 9, 2009)

Samantha shared that it was good to see the pyramid diagram because it gave her a better idea of the steps involved. Patty mentioned that the information was clear but it was not a new concept to her even if it had a new moniker.

By the end of the pilot program, all teachers felt more knowledgeable about RTI and many of the teachers reported learning most through practice. Barbara, a special education teacher admitted that her job is to differentiate and to collect data, but she learned about the tiers through this process and how the levels of support should vary in intensity. Wailani learned about the need for RTI even if she was skeptical in the beginning. David who studied RTI in graduate school admitted he learned as well:

I [learned] there is a formalized process that exists before you go to DEFCON 4 (a level of alert readiness for the military) that evaluates kids [for Special Education] and that oftentimes if it is done diligently, it can really help a kid get back to where they need to be. Also, it probably goes a long way with parents. (personal interview, May 24, 2010)

While Patty initially stated that RTI was what teachers were “already doing just under a different name,” she reported that she learned how difficult it was to keep data, but how very important it is to the process. It proved more difficult than CSSS’s method of checking off boxes for modifications, accommodations and interventions used. Ben learned that RTI is cyclical in nature and that it requires a lot of training to broaden teachers’ knowledge of interventions.

***Interventions and modifications.*** Eight out of the ten teachers felt knowledgeable about interventions during the initial interviews in September. When asked what

interventions they put in place for struggling students, common practices were evident as seen in Table 7.

Table 7

*Interventions Reported by Teachers*

<i>Intervention Reported</i>	<i>Number of Teachers</i>
Providing Modifications	2
Working with a curriculum program with more fidelity	3
Collaborating with Other Professionals	2
Teaching additional skill based or thinking strategies (AVID strategies or Thinking Maps)	6
Flexible Grouping	3
Conferencing with Student	6

Throughout the pilot program, teachers reported using more interventions. Charlene reported the team-based PLCs were helpful because they offered a forum to discuss what interventions have been done and which had been successful. Patty confirmed this but noted that what is working in one classroom, did not necessarily work in another classroom; however, it helped her realize that her repertoire of interventions was larger than she realized: “We have interventions- we just didn’t know we were *doing* (emphasis hers) interventions” (group discussion, February 19, 2010).

Midway through the pilot program, the 8<sup>th</sup> grade team asked for a list of interventions being used at the school; interventions that were manageable and that could be used for Tier 1 and 2 in order to make it easier for PLCs to come up with interventions. They recognized that it was easier and more time efficient to generate ideas from a list rather than spontaneously.

By the end of the pilot program, other teachers felt similar to Ben: that more time and professional development was needed to design and learn targeted interventions. David stated that more PLC time was needed for planning differentiation within the classrooms and for designing targeted interventions.

***Professional development.*** Teachers also stressed that because this was a pilot program, more professional development was needed in other areas as well, most specifically, methods of data collection. Barbara stated:

I think if you have a guideline and know what you are looking for, it's different than "Go collect data." "Well, how do I do that? What do I do it on?" That's a lot harder to figure. Sometime that can hold people accountable, something as simple as a tally mark. (personal interview, May 30, 2010)

Ben also pointed out that teachers may have a fear of quantitative data, so professional development on analyzing quantitative data may be helpful.

While teachers were not initially very knowledgeable about the RTI process, the majority were willing to learn more about it and the informational session provided answers to questions teachers had. Teachers asked clarifying questions and all reported to have a clearer understanding of the process after the informational session. Since some key decisions were not made, objectives and timelines were still unclear which frustrated some teachers. Initially teachers reported using interventions and not needing professional development, however, as the RTI process continued, teachers felt otherwise. Recommendations for additional professional development on interventions and data collection were made.

**Practice.**

*Assessments.* In order to begin the pilot program, teams needed to come up with a list of students to be the participants for the study. They were given no guidelines or restrictions; it was a team decision. When I initially asked teachers how they identified struggling readers, they described the different assessments they used.

Eight teachers from both the 7<sup>th</sup> and 8<sup>th</sup> grade teams reported using the STAR assessment and their performance in the Accelerated Reader Program to identify struggling readers. STAR is an assessment created by Reading Renaissance for the purpose of identifying a grade equivalency for the Accelerated Reader Program. This assessment is a cloze passage test which prompts students to insert a missing word into a sentence. Aloha Middle School purchased and implemented Accelerated Reader for a silent sustained reading period. The grade equivalency derived from the STAR test dictates what each student's individualized reading plan based on the initial reading level and points needed to meet an individualized point goal. Ben stated:

The first way is through the AR STAR testing system, so that's one way we are able to tell if they are struggling, like if their grade level is far below, even though it is typical for our student cohort to generally be below, but there are some that are far below. So they're at 3<sup>rd</sup> grade, 2<sup>nd</sup> grade reading levels.

(personal interview, September 9, 2009)

Samantha stated her team regarded the STAR reports, but also used them in correlation to AR performance, "We looked at their STAR scores, look at their reading levels in terms of AR" and "monitored their AR scores" (personal interview, September 9, 2009). Teachers did not feel comfortable relying solely on the STAR reports. Barbara confirmed

this statement and shared that this data was also combined with observational data: “As of now, we have been using AR and to see what kids are not making their goal, to see which students are reading, see which ones are having troubles picking a book that is appropriate for them” (personal interview, September 9, 2009).

Three of those teachers mentioned using the STAR reports in conjunction with additional assessments like the Gates-MacGintie Reading Tests, Hawaii State Assessments (HSA) and Stanford Diagnostic Reading Test (SDRT). David spoke of his process for tabulating assessment scores for analysis:

We looked at AR scores, diagnostic scores, we looked at the GMRT, we looked at the past HSA reading scores, and in that spread sheet that I created, we go through and sort out students by their different scores and try to find those students at the bottom end. (personal interview, September 9, 2009)

This 7<sup>th</sup> grade team also looked for trends in scores to identify specific weaknesses.

David continued to say:

...there may be kids who are particularly low on the GMRT, AR and even HSA and that way we identify him or her as someone who requires additional supports in reading, reading in general, reading comprehension, and we can look deeper to see if it's a fluency or decoding issue. (personal interview, September 9, 2009)

Ben did admit that he questioned the validity of the STAR test and how there were discrepancies in reports. He would use other assessments to either validate or contradict the STAR scores.

Three teachers acknowledged using historical data, but these teachers generated this information in different ways. Patty stated that her 7<sup>th</sup> grade team “look[ed] back in their cumm[lative] folders because sometimes they list specific reading problems the kid may have” (personal interview, September 9, 2009). Although Wailani admitted she did not know of any identification methods, she pointed out that information on students who were already identified was provided:

Ms. Barbara [special education teacher] has given me the information she has on her kids, the SPED kids, and the English Language Learners, we have them identified, but I guess those are the two methods as far as I’m concerned that I’ve been given for identifying those students. (personal interview, September 28, 2009)

Two teachers reported using the STAR assessment as an indicator that additional assessments were needed. David reported:

[with AR, I] know their book level, and I just used my stopwatch at the word they started at, stopped it when where they ended at and counted, so I have a ballpark- I have two kids that are reading at the same grade level- a 3.2, literally, one kid is reading 72 words per minute, one kid is 45 [corrects himself] 145 words per minute. (personal interview, September 9, 2009)

When asked what he was planning on doing with this information, he stated that he had not gotten to that point yet, but the identification process was completed. Ben also mentioned that the English department had tried to do running records and miscue analyses with students who scored low on the STAR assessment, but that it was “extremely difficult to

manage in an AR room, so it didn't quite get off the ground" (personal interview, September 9, 2009).

Seven teachers commented that observational data contributes to their team's identification process and this observational data focused on students' classroom performance rather than test data. Samantha identified students as struggling readers by observing if "the kid has a hard time reading aloud for me" (personal interview, September 9, 2009). Barbara focused on fluency, but felt that reading comprehension observations needed to be used in identification because she feels this is the area in which many of the middle school students struggle:

...fluency is a little harder than decoding, but for reading comprehension, it would mainly be: we take a lot of notes in Social Studies... and also in English class we have packets ...to see who can...complete the open ended questions. Not so much the vocab because they are all able to look it up in a dictionary, but the ones who really have a hard time going back and really talk about what was happening in the book. (personal interview, September 9, 2009)

Kelly also agreed that observing for comprehension was important and noted that she felt middle school students could read fluently, but when questioned, they displayed difficulty processing what they just read.

Benjamin noted that students' performance did not necessarily correlate with the STAR test results. He explained:

I would say that my experiences in the classroom with individual students have been far more telling overall because even though they may have high

vocabulary recognition, their overall comprehension can be really low and so they might do really well on the STAR test, but not really understand the story from the get-go. They won't be able to pick out the theme. They can tell you what the word means in context, but it's a little bit of a different skill.

(personal interview, September 9, 2009)

Even though many teachers reported using the STAR test in order to determine reading level, Ben had some doubt regarding the STAR test's reliability and purpose. In fact, the teachers were locked into giving some of the assessments by the publishers. Each educational program had its own assessment used for a specific purpose. Using multiple programs yielded many assessments, each claiming to assess reading grade level equivalency, yet producing different results.

When it was time for teachers to identify which students would participate in the study, not one teacher mentioned using the quantitative scores from the assessments mentioned previously; decisions were made based on other factors. Teachers first cross-referenced Special Education and English as Second Language (ESL) rosters to make sure they were providing support for students who were not already receiving support from other school services or programs. Both teams reported that they avoided students with chronic absences because they wanted the selection process to be based on "purely educational factors, not outside factors" (Samantha, personal interview, February 16, 2010).

While they did look at attendance records, this statement was contradictory because all teachers reported making decisions based on non-academic factors such as parental involvement, personality matches with mentor teachers, student motivation and time already invested in the particular student. Ben admitted that his team felt their chances of success

would be greater if “we chose students whose parents would be more behind the process and whose parents would support any efforts we were making...” (personal interview, February 16, 2010). Kelly acknowledged a different concern about parental involvement. One of the students they chose was not ESL, but his parents were non English speaking and as a result, this student was not getting the level of support needed at home, not because there was a lack of effort, but because this student “doesn’t have the broader knowledge and the interaction to build on” and because parents were unable to offer support (personal interview, February 16, 2010). Ben and Charlene also mentioned that motivation was also taken into consideration and Kelly confirmed this by saying “if [the students] are not interested and they do not have buy-in and they are going to whine and complain and not do the work, it’s not going to work” (personal interview, September 30, 2009). Finally, teachers from both teams mentioned they chose students for whom they had already made home contact, administered some Tier 1 interventions and placed some added focus on so they could see if their efforts could be taken to a higher level and to hopefully see success.

**Data collection.** After the initial interviews, some teachers mentioned that data collection concerned them. David specifically, fired off a list of questions that were unanswerable at that time as his main concerns:

1. How are people going to collect data?
2. How are they going to organize it?
3. Is it going to be easy to read?
4. Easy to interpret?
5. Is it going to be relevant?
6. Is it going to be taxing?

7. Are they going to be overwhelmed by it? (personal interview, September 28, 2009)

With these questions in mind and with David's help, the RTI cadre created forms for data collection at each Tier in hopes it would ground RTI discussions on performance evidence and help teams document and organize their data. These forms (see Appendix E) were introduced at the first group discussion. While the forms were designed to help, the RTI cadre also wanted feedback on them if teams felt they were unmanageable or if important information was left out. The 7<sup>th</sup> grade team felt the forms would not be conducive to their work style, so they left the meeting with the task of revising the forms to suit their needs. The 8<sup>th</sup> grade team said they would look it over, but did not see any foreseeable concerns at that time.

By the second round of interviews, when questioned about data collection, teachers expressed frustration about the lack of communication between administration and teachers, expectations and timeliness. Barbara asked, "...even with the forms you showed us with the tiers, is that the specific form we were supposed to take with us to fill out?" (personal interview, February 17, 2010). She followed up by saying the team was waiting for confirmation from their guidance counselor that contact was made with parents or guardians first. Samantha, the 8<sup>th</sup> grade team leader admitted:

We honestly have not really gotten to it. It's like 'we need to do this, we need to do this' but nobody really knows where to go from there. [Admin] will email us, but then he is out or doesn't show up at the meeting... (personal interview, February 16, 2010)

David had mentioned at the first group meeting that part of the 7<sup>th</sup> grade team's revision process would include a way to get the documents online to make them more accessible. This was not done by the second interview and Ben, the team leader, similarly disclosed, "I've seen that we are trying to create an organized system for collecting data in a single place using the computer system. There is movement, so it's not like we have been stalling, but- {end of his sentence}" (personal interview, February 17, 2010).

Based on the interview feedback, the school's computer technician was contacted and asked to create a special location on the State's online Lotus notes system for uploading the documents. The tab was listed as an online meeting which teachers could electronically invite each other to join. Upon accepting the invitation, each team member could view the documents and edit them from their classroom computers. While the 7<sup>th</sup> grade team suggested using "Google docs" for privacy and security, we deemed it best to work with the school's secure server. The second group discussion was changed to yet another informational session on how to use this Lotus system. It was decided at the second group discussion that I would be the lead person on facilitating teams with the data entry, necessitating my presence at the team's meeting when RTI was discussed. It was also decided that I would meet with teams once a month for specific RTI issues. This was done with the intent to solve the communication gaps that were occurring between teams, guidance counselors and administrators.

Scott, who did not ask any questions or make any comments during the second group discussion, was the first teacher to add data to the online system. He also updated the data frequently. Five out of the 10 teachers, Ben, Patty, Charlene, Wailani and Scott posted data. The other teachers stated they could not access the button due to computer problems or did

not have time. It became practical that I would attend team meetings with my laptop to add any additional data that was physically brought to the meetings (i.e. grade books, students' samples, etc.) that was not already previously inputted.

At the exit interviews, Scott acknowledged that the most challenging part of RTI for him was tracking and collecting all the data information and having it ready for the team. Patty also admitted that it was difficult to get all the information "out of our heads" and onto paper, but saw the need for this data in subsequent years:

It's also good to get things out of people's head. There's a lot of information that walks off this property because it is just in teachers' heads. So if that stays here and we can refer to it next year, we don't have to be left in the dark.

(personal interview, May 25, 2010)

Ben confessed, "I didn't struggle with [data collection] per se because you did it for us, but if you hadn't of taken care of it for us, I perceive that would have been my biggest problem"

(personal interview, May 29, 2010).

***Collaboration.*** Collaboration (or lack of) was seen in many instances throughout this study. There was collaboration between teachers and students, teachers and parents and amongst the teachers in professional learning communities.

As decided in the first group discussion, students and parents would be made aware of the RTI pilot program. The 7<sup>th</sup> grade team of teachers met with each child individually. Patty noted that meeting with the students provided teachers with more insight on the students' frame of thought:

One of the things we've noticed with our students is that they don't see the internal structure [of the team]. They know we are on a team, but they don't

conceptualize what it means. But when we can sit there and say, ‘This is what we see in every one of our classes,’ then they really see what it’s about...and having them have some input on the solution. They can all see us all agree at the same time, so there’s no trying to catch up’ or ‘talking behind someone’s back’. (personal interview, February 16, 2010)

Students were made aware of all the steps taken to help them improve not only for them to see how much effort the teachers were putting into them, but also to prevent them from feeling singled out, “angry or embarrassed” (Kelly, personal interview, September 30, 2009).

Secondly, parents were informed and parent/teacher meetings were scheduled. At the first group discussion, teachers stressed how crucial this was. Patty recommended that we find better ways to communicate with parents and what they can do to support their kids. She stated that once students begin failing, parents ask for extra interventions such as a “dog-tag,” (a school-based progress tracking sheet that must be signed by all teachers and parents daily) but if the monitoring was done preemptively, these extra steps would not be necessary. Samantha seconded that and said, “If we are spending this much time on only five kids, parents need to pull their weight too” (personal interview, May 27, 2010).

Every teacher mentioned working collaboratively with their colleagues in every interview. Initially, teachers stated that they met frequently and discussed problems certain students were experiencing. Charlene shared that the team would also discuss what strategies worked best with the students, but added, “It’s funny because sometimes it’s working in one class and not the other classes” (personal interview September 30, 2009). When asked the

follow up question of what the team did at that point, Charlene shrugged and could not provide an answer.

As the pilot program proceeded, teachers found themselves struggling to make time to reflect on the RTI process and student progress. As mentioned, Ben requested a timeline to help keep his team on track, but in teaching how PLCs function, an RTI meeting format was requested. Teachers wanted to be sure they kept their RTI time “sacred” (Patty, personal interview, February 16, 2010) and to prevent the time from turning into a *talk-story* session about students. This request was brought back to the RTI cadre who worked on creating an RTI driven team meeting format (Appendix F). This format was created based on Dufour’s (2005) model of a PLC that looks at data, makes recommendations for interventions and finally, assesses whether the interventions were successful by analyzing data.

The meeting format was broken down into four parts. The first five minutes of the meeting was to review minutes from previous meeting and to clarify any questions. The purpose of this time was to remind teachers of the information given out at the last meeting and to get all teachers updated. The second five minutes of the meeting was to be used in order to review or clarify the three tiers and the targeted students. The purpose of this time was to get all team members using the same vocabulary and should have the same understanding about the tiers. The third part of the meeting would be approximately 40 minutes and it involved discussing data, findings, and targeted students’ responses to the interventions. The final part of the meeting would last approximately 10 minutes and this time would be used to create the following meeting’s agenda, discuss what data needed to be collected and who would collect it and any additional information needed to move forward with the RTI process.

Once teams began using the format, teachers learned that RTI, like PLCs have a: ...circular nature and it's beneficial at the middle level. I think it takes a lot of training and I've learned that a deficit of mine as an educator is that I have a limited range of what I can do, limited strategies that I know and use and I need to know more about interventions.... (Ben, personal interview, May 29, 2010)

During the second interviews, descriptions of RTI driven meetings were more detailed. Patty stated they would sit down to "see if we [were] all doing differentiation, which are things you always do anyway: chunking, small groups, written directions, self-assessment checklists" (personal interview, February 16, 2010). Productivity levels increased. Scott stated that the team meetings were enlightening to learn about the different work he could do. In the third interview, he added, "It helped me feed off them and it was a good reminder of strategies I knew, but forget to use" (personal interview, May 27, 2010).

As evidenced by the group discussion data, participation in the PLCs evolved as well. All group discussions were held in the team leaders' classroom. For the first group discussion, the team leaders were the facilitators. For the seventh grade team, Ben shared data first and then invited teachers to speak through directives. All teachers shared information (assertions); however, Wanda gave an expressive statement and said since she was an elective teacher, she could only provide data on certain students. David had a similar concern since, as a special education teacher, he was only familiar with a handful of students and had no experiences with the students chosen to participate in the RTI pilot. These expressive statements reveal that Wanda and David were worried they could not contribute to the PLC to the same extent as the other members. Regardless, based on other teachers' data

and anecdotes, David made assertions in the form of suggestions for interventions and how they could be used across content areas. Even though David was concerned about his ability to participate in the PLC, he used his knowledge of RTI as his contribution to the group.

The first group discussion for the eighth grade team was very brief. Samantha, who did not attend the informational session, made expressive statements about the miscommunication of expectations. Teachers did not come with data and Samantha assumed blame for not informing the team. She stated, "...we don't have anyone taking the lead and we don't have anyone on our team from the RTI cadre, so we just don't know..." (group discussion, February 22, 2010). Then, as the team leader, she then directed Kelly to talk about student performance. Barbara gave assertions on the next steps needed in RTI and Samantha gave directives for what the team needed to have prepared for the next discussion. I was able to provide the team with background data on the students that I retrieved from the students' cumulative files. After hearing some of the students' reading assessment scores, teachers were shocked. In regard to Mike's former HSA reading assessment score of 298 and his GMRT score of 7.9, Kelly exclaimed, "Get out of here. No way- are you serious?[laughing] I would have never seen that one coming"(group discussion, February 22, 2010). Barbara covered her mouth and Scott shook his head in disbelief at this revelation. Wailani offered an explanation by saying, "Maybe he is better at multiple choice tests?" (group discussion, February 22, 2010). Kelly's expressive statement revealed her doubt and uncertainty about how well she knew her student. This resonated with the team which prompted a discussion aimed at uncovering Mike's strengths.

After the first round of discussions, I became the RTI coordinator and facilitated the meetings. For the seventh grade team, group discussion 2 and 3 were based on the RTI

protocol documentation that teachers had been filling in online. With the data already compiled on one form, discussions began promptly. Changes in frequency of speech occurred in three participants. David spoke less in group discussion 2 and he did not attend group discussion 3. Wanda spoke significantly more in group discussion 3. In regards to Kayla, she stated, “Her confidence boosted. In Socratic seminars, she was one of the only people who read it and actually participated in the process, but still needs reading and writing support for next year. Unfortunately, she is dropping out of AVID” (group discussion, May 21, 2010). This expressive statement indicates Wanda’s high self-efficacy since she feels Kayla would continue to improve if she continued in the AVID program and under Wanda’s tutelage. This was significant since Wanda admitted she was not knowledgeable about RTI and felt she had little to share in the previous group discussions.

For the eighth grade team, teachers were still learning the online database for the documentation. By discussion 2, only Scott inputted data. Kelly, Wailani and Samantha provided data verbally and I entered it into the database during the discussion. By discussion 3, there was a notable difference in the amount of conversation. Scott, who remained silent in the informational session and spoke sparingly in discussion 1 and 2, contributed more. He gave both assertions regarding student progress and expressive statements about student performance. Scott was able to contribute facts and explanations to the discussion (assertions), which suggests an increased knowledge of RTI. His expressive statements finally reveal his vested interest in RTI. Kelly, who was initially skeptical and critical of RTI in the beginning of the pilot program made the directive, “I told [another English Language Arts teacher], that you have to RTI these kids. Shuffle up your advisory period kids, take the lowest ones and hit ‘em with the interventions” (group discussion, May 20, 2010). While she

used RTI as a verb, this directive shows her eagerness to share the experience with other colleagues. Samantha continued to provide negative expressive statements regarding the futility of RTI in her class since the school's semester grade policy for math prevented kids from being promoted if they had already failed one semester. These expressive statements give insight into Samantha's perceptions of RTI. While she is participating in the process, she does not see value in it with regard to her own class.

David discussed how participating in this pilot program helped teachers see that all teachers are responsible for students who are experiencing difficulties learning, not just the Special Education teachers. He talked about the large percentage of special education students at Aloha Middle School (10.4% for the 2009-2010 school year according to HIDOE) and stated:

I think it's poor diagnosis and people not wanting to do the process that we are doing and it's like, "oh well, let's just give [the struggling students] to the SPED teachers...I think our team was very responsive and they work well together as far as making sure everyone is on the same page...It wasn't something that was taken lightly or blown off...and just having that blunt exposure to the RTI was beneficial. (personal interview, May 24, 2010)

The collaboration between general education teacher and special education teacher was further evidenced when Wailani reported how Barbara helped Mike in her class with small group instruction even though Mike is not a special education student.

During the initial interviews, Barbara clearly laid out the expectations of special education teachers and that of general education teachers, and added that she found herself bridging the gap and having to jump into both roles:

The gen ed teachers are the ones that should also be differentiating more so than us. We should be modifying, but there are also students that are not classified as needing certain special services but who deserve differentiated instruction. Legally, they [general education teachers] are required to differentiate. And eventually, I'm going to have to provide more of the differentiation. It's my job as a teacher to teach all students, no matter how they are learning, whatever level that they learn at, it's my job to kind of figure out...I think once they [regular education teachers] get the goals [IEP goals], they are like "here's the student- you go ahead and modify it for them. They are not ones who can get it, so modify it for them. (personal interview, September 25, 2009)

By the end of the pilot program, Barbara acknowledged that the general education teachers were taking the lead on implementing interventions and modifications, since she did not interact with four of the five RTI students due to scheduling conflicts.

***Interventions and modifications.*** Teachers acknowledge using more interventions and modifications in their daily practice as a result of the RTI pilot program. As evidenced from the above quote, special education teachers felt they were previously relied on for modifications rather than general education teachers taking that charge. This conflicts with the general education teachers' responses during the first round of interviews. When asked if they have used interventions, general education teachers reported they had. All ten teachers, general education and special education, reported administering the strategies listed in Table 8.

Modifications were discussed and teachers reported using guided notes or guided questions to help students comprehend the text. During an observation, skeletal Cornell notes were given to Mike and other students Scott observed as struggling. The notes targeted sections in the Science book chapter Scott wanted the students to focus on. There were fill in the blank sentences and also specific questions Scott wanted students to answer (personal observation, March 26, 2010). Another teacher reported having a copy of the class notes to give to the students because students would take too long if they had to look up at the board, freeing up time to do reading or independent work.

Considering the only reading program Aloha Middle School has is Accelerated Reader, the teachers reported following the tenets of the Reading Renaissance program with more fidelity as an intervention. These include, matching appropriate books to students' reading levels, taking status of the class reports, analyzing diagnostic reports, having students complete story maps prior to taking the quizzes and doing reading power lessons. Samantha stated that fidelity also meant monitoring the students more closely, "I'll read their story maps, check their reading level and if I can't read it or understand the map, I'll ask them questions" (personal interview, September 9, 2009).

Teachers reported collaborating with other professionals such as counselors and other team teachers to determine if the student is struggling in all content areas rather than in one specific class. This collaboration was viewed positively as an intervention and was discussed previously in this chapter.

Aloha Middle School implements the use of Thinking Maps and teachers are required to use Thinking Maps in their lessons. These maps are introduced earlier in the year as resources for students, but in cases of struggling students, teachers have required students to

use these as a preemptive tool. For example, Ben required one of the RTI students (Paul) to complete bubble maps as a prewriting exercise on constructed responses. Wailani relied on vocabulary charts, specifically Frayer's model, for remembering content vocabulary prior to reading expository texts. Kelly reported using the same strategy. Teachers also researched and used AVID strategies to promote critical reading with students. Activities such as the 5-4-3-2-1, Cornell notes, WICR lesson planning and AVID critical thinking worksheets were used when reading expository texts. Kelly, Wailani and Ben said they relied heavily on the AVID workbook to pull resources for their instruction and the entire class benefitted, not just the RTI students.

Three of the teachers used flexible grouping as an intervention. Ben admitted he had some reservations about heterogeneous grouping because he worried about the level of embarrassment struggling students may experience but admitted that hearing strong readers helped struggling readers' fluency. As a result, he preferred flexible grouping based on the task at hand. Heterogeneously grouping students for reading was observed in Kelly's class as well (personal observation, September 8, 2009). She then had students take notes, but had different tasks based on reading levels. The higher leveled readers had tasks that were more abstract (theme), whereas lower level students had to locate explicit items (characterization). The different tasks drove the groups' discussions on the text. Wailani used heterogeneous grouping and jigsaws the reading so everyone had a task and could be experts on their own section (personal observation, January 28, 2010).

Six of the teachers mentioned either conferencing with the struggling students more frequently or monitoring them more closely, to the point of one-on-one mini work sessions. Three of the six teachers reported reading with the student, but one teacher mentioned how

time consuming that can be in a class of 30 students. Four of the six teachers mentioned they ask comprehension questions and two of those teachers added prediction questions as a way to get students to become more motivated and to think critically about the reading. David described one of his intervention sessions as:

I read with them, I check out their books...eventually down the line, look into a miscue analysis and then we are going to have the chance to sit there and talk about the story all entrapped in that setting and I'll ask them clarifying questions: "So why is this happening? What do you think is going to happen next?" – things like that and it takes a while to get through the book, but I think it, it kind of models to them how they should be approaching the story, kind of approaching it in an active manner rather than passive manner- you know, actively seeking information in the text rather than letting it come to them. (personal interview, September 9, 2009)

Finally two of the six teachers reported monitoring the students' work more frequently, to catch errors and correct them as quickly as possible.

During the second RTI driven team meeting, teachers sat down and analyzed quantitative and anecdotal data to determine how to administer Tier 1 interventions to the student participants. Most interventions were the same mentioned in Table 8, however, six more were added: content specific intervention programs such as PLATO, using leveled texts, Step Up to Writing strategies, supplemental grammar activities, goal lists and planner usage, and mentoring.

Even though this study focused on reading interventions, many of the content teachers reported interventions used in their own content area. Barbara and Samantha both

discussed using the PLATO system in Math to re-teach and to provide practice to those struggling students based on what skills they showed deficiencies. Prior to the informational session, this system was not mentioned at all.

Teachers reported using leveled texts as an intervention. Wailani purchased a fourth grade text for Tamara so Tamara could practice reading, understand the content and still participate in the class's activities. The Accelerated Reading Program also relies on students' reading leveled texts, so all students did this as well during the AR period.

Another intervention for Matthew involved using a strategy learned in Language Arts class in Math. The math teacher decided to teach him a strategy borrowed from the school's writing program, Step Up to Writing, to help organize word problem answers and constructed responses. The student had to deconstruct the prompt and then create boxes to help him organize the steps needed to complete the math problem.

Also, Ben offered supplemental grammar assignments for Jon to aid in writing skills which eventually led to outside tutoring for grammar during Tier 2.

As another intervention to address motivation and/or time management issues in students, teachers were creating a goal list for the week for students in their planners. Each student would review what work needed to be done, write it in their planners and the teacher would then monitor to ensure the work was done and handed in.

Finally, the idea of mentoring surfaced from conferencing with students. Teachers realized that middle school students benefitted from an adult mentor and when this mentoring relationship began, more information was realized which aided in interventions. Kelly's experience was "overwhelming." She started journaling with one of the RTI students she was mentoring and had asked him to write about something he wished everyone knew about

him. He revealed to Kelly in his writing that he wished people understood that he could not hear well and wrote, “if you don’t say my name, I may not pay attention and realize that you are speaking to me” and that when the teacher would say his name, he would watch the teacher’s lips as he/she talked. Kelly divulged, “We [teachers] didn’t know this and there was no information anywhere about this!” (personal interview, February 17, 2010). From building this teacher-student relationship, Kelly was able to bring this information back to the team and address this issue immediately. Mike was referred to the school’s health aide who tested his hearing and notified his parents that an independent hearing test needed to be done by the family physician. In addition to verbal directions, he was individually asked to repeat directions to ensure he heard and comprehended the instructions and then when the directions were more complex, he was given written instructions. Teachers working one on one with students, becoming mentors and building relationships with students were seen amongst both teams.

***Manageability.*** The amount of time spent bonding with these students, analyzing and collecting data and teacher collaboration time spent on the student participants was significant. Teachers commented that while students could benefit from this, the amount of work was daunting. This was a challenge from the initial stages of the RTI pilot program.

Ben summed it up when he stated:

I think often our tendency is to throw an extra thing [school initiative] on and assume that that extra half hour is going to be absorbed or it’s just something that you’re supposed to deal with because it’s good for the students and I understand that it is good for the student. I would never argue that RTI’s not good for the student , but I would point out that there is a tendency in

education to throw an extra thing on without much thought to how it is really going to be integrated or what the effect it's going to have on the teacher because individually, that one thing looks really positive and we should be doing it, but if you look at how it's written in large, it's that one thing plus every other one little thing that starts to compile and eventually you have a teacher who is too stressed out to do any one thing all that well. (personal interview, September 28, 2009)

Lack of time and stress can hinder teachers' buy-in with new school initiatives.

Samantha noted that other school duties not directly related to teaching were cutting into her team's collaboration time. Parent teacher meetings of non RTI students, IEP meetings, professional development and grading left the team with little time to devote to RTI. Both David and Patty said that in order to come up with specific interventions, RTI needs to have "sacred" meeting times so that inconsequential matters do not distract from the task at hand.

When asked if the school should include all students in RTI or just keep teams with a small number of students to work with, teachers were in favor of keeping the number small until the entire faculty became familiar and comfortable with RTI. Wanda felt that piloting RTI again with five students would be manageable and said, "It's just like adding five more kids to their SPED [count]. Granted, some teams won't have SPED, but it's just like five more IEPs to pay attention to" (personal interview, May 27, 2010).

The issue of timeliness was also brought up. RTI requires immediate intervention and teachers felt that the start time of the pilot program lagged. Barbara felt some concern over having interviews, informational and group discussion meetings, but little action in the implementation. When asked about her perceptions on the first informational meeting, she

said, “It would have been nice to have something set right there, like ‘take this home, have this done, let’s get the ball rolling right away’ because we are still waiting for our parent meetings to be set up” (personal interview, February 17, 2010). Samantha also expressed frustration because she felt that the team had already taken two meetings to learn about RTI, another to choose the RTI students, another to draft a letter to parents and there was no movement yet. What exacerbated her frustration is the fact that her algebra class is a half credit course, so for some kids, starting RTI at the end of second quarter was too late. If students failed one semester, they would automatically have to go to summer school, further diminishing their motivation in math.

Other teachers complained that they were still waiting on administration and counselors to initiate the process. Patty revealed:

...it’s the lag time that kills us. It’s so slow. We know within the first few days that a kid is struggling, but to get anything done about it is difficult. Like we have this one kid who is going to fail everything- every class. We knew this kid was going to have problems, but he is still going to fail 1<sup>st</sup> quarter. By the time you have the meetings, kids are already so far behind that it is hard to catch up.... (personal interview, September 28, 2009)

In a later interview, she recommended that teams sit down prior to the school year beginning to look over incoming student rosters and see if any are flagged for academic struggles to prevent this time lag, but again, the lack of time was brought up. Wanda suggested the same.

Another challenge teachers faced with RTI concerned the number of students each teacher has. At elementary school, teachers tend to have a caseload of 25-35 students. At middle school, teachers tend to have 115-150 students. At the beginning of the pilot

program, when discussing certain interventions, Patty was skeptical about being able to provide Tier 1 or 2 small group interventions with the number of students she had. She said, "... that would be great if I had 10 kids in a classroom, but it is not going to be great and it will not work in a large group setting... I can't have some people talking when everyone else is trying to do their work" (personal interview, September 28, 2009). She went on to say that the number of students who needed her help was overwhelming. "[laughs] I think they're all struggling readers to one degree or another. I would say out of the 115 students we have, maybe 15 are not struggling readers." David confirmed her statement when he said:

I think we have to know our students and sometimes it's really hard to get to know all of them because we have so many and you know, there are so many who have different needs that you wonder if you can really target them and get to them all. (personal interview, September 28, 2009)

The inclusion model being implemented at Aloha Middle School requires Barbara to be in certain classes during periods that have a higher number of special needs students. However, because she supported all four core content areas, her schedule hindered her ability to know all the students. She said, "...they mention students in a team meeting and I'm like, "Who are they?" and you know, it's third quarter and I still don't know" (personal interview, February 17, 2010). She further elaborated in a later interview that when you only see a student for 75 minutes every other day, it is challenging to gauge whether the behaviors or weaknesses are constant or if the interventions are working.

Many subthemes surfaced under the theme of practice. While teachers were using assessments, there was little consistency on which assessments were being used and how they were analyzed. Teachers also noted they experienced problems with data collection and

professional development was needed in that area. Teachers understood the importance of collaborating as a PLC when RTI is implemented and also stressed the importance of bringing the students and parents into the decision making process. Teachers reported using interventions and modifications in their classrooms, yet they did not know the difference between them. While they were able to generate possible intervention and modifications, teachers also admitted that more professional development was needed in this area. Teachers found collaboration important when deciding what intervention to use. The significance of the teacher-student relationship was also seen and as teachers built these relationships, they learned more about the students. While implementing the RTI pilot program, teachers expressed concerns they had and articulated challenges they were facing. If possible, the concerns were addressed, but others were brought back to the RTI cadre and administration to plan the following year.

**Confidence.**

*In self.* At the beginning of the pilot program, seven of the ten teachers felt confident they could provide Tier 1 and 2 interventions to struggling students. Their confidence had some caveats though. Four teachers, Barbara, David, Ben and Patty, felt confident because they either studied RTI in previous professional development and/or in their college preparation or considered RTI similar to CSSS and felt confident in their abilities to carry out the CSSS process. The two special education teachers were included in this group and felt extremely confident since they believed they were already doing many of the RTI components with their special education students. Two other teachers, Wailani and Wanda reported that they knew nothing about RTI, but were very confident they could learn. Wailani stated, "I can learn, I am very resourceful. I think I can pick it up. I'm confident in

that respect” (personal interview, September 28, 2009). Finally, Patty stated she was confident in her own abilities, but this confidence was contingent on student willingness and intrinsic motivation. The three teachers who did not feel confident, Samantha, Scott and Charlene, felt this way because they were not familiar with RTI.

By the exit interviews, all teachers felt confident in providing Tier 1 and Tier 2 interventions. Charlene disclosed, “In the beginning, I had no idea what it [RTI] was about, even after we had the informational session, but when we actually got into doing it, that’s when I ‘got it’” (personal interview, May 27, 2010). Wanda reported she was still confident, but admitted she forgot to follow through at times and frequent reminder emails from me kept her on track. Ben maintained his confidence, but he did want to stress that it was time consuming. Even though all the teachers voiced their concerns regarding the challenges of RTI, they still felt confident in their abilities to provide interventions that could make a difference in students’ learning.

***In other teachers.*** Teachers were also extremely supportive of their team teachers. I did not specifically ask if they were confident in their colleagues; however, they freely acknowledged their team members’ abilities. In the initial interview, Patty stated that her team was organized, they set goals and she was confident they would be successful overall. Samantha stated that her team was very effective in supporting each other. She said:

We worked well together and I think that really makes a difference. I can just imagine doing this my first two years and it wouldn’t have worked. You have to trust your team members to implement it because if everyone doesn’t do it, it’s not going to work. (personal interview, May 27, 2010)

There was a change in perspective of general education teachers' roles as well. During the last interview, David mentioned that he was not used as a resource (being a special education teacher) as much as he thought he would be because he thought, "...the teachers were able to handle it on their own" (personal interview, May 24, 2010). This contrasts Barbara's statement of general education teachers deferring to special education teachers for modifications and interventions during her first interview. In her exit interview, Barbara mentioned how, with the exception of Mike, the general education teachers were the ones administering the interventions to the RTI students and collecting all the data since her schedule didn't allow her to follow all the RTI students.

While the teachers expressed confidence in the teachers they worked with, they were skeptical about other teachers among the faculty. When asked how they envisioned RTI running school-wide, three teachers had reservations about RTI's success. Patty stated, "Some of them [the other teachers] are going to be like, 'I tried it. It didn't work. I'm done'" (personal interview, September 28, 2009). David stated that RTI would be difficult for those teachers who, "live and die by the 7:45-2:45 time frame" because this process does require a lot of effort and time. Finally Ben brought up the recent furloughs, budget cuts, and teacher displacements that were occurring within the school's complex. Aloha Middle School was projected to lose close to 40% of their teachers. He confessed:

my hunch is that a majority of the teachers that are left in the classrooms would not be as willing to try this as most of the ones who are getting cut and this is going to sound callous, but they are the youngest ones who have come out of recent masters programs who would take an interest in doing this sort of

thing. They don't have their curriculum set in stone. I sound awful saying this, but I think that is honestly the reality. (personal interview, May 29, 2010)

The reality of the budget cuts came to fruition when five of the ten participating teachers were cut from Aloha Middle School at the end of the school year. Another teacher was released from her line and content, but was asked to return and teach a class in a different content area outside her teaching licensure.

***In school administration and leadership.*** Teachers were less confident in the school administration and leadership of RTI in the beginning of the pilot program and while there were some reassuring measures taken by administration and leadership, teachers still expressed doubt in the school administration and leadership. Through the interviews, teachers expressed how the administration “told” them they were piloting the program, rather than being asked. In field notes from the first informational session, however, the vice principal did ask, “So are we all on board?” and no one spoke up negatively. The teachers were given the impression that they did not have a choice. Samantha said, “It seems like we don't have any choices. They told us that ‘you are the AVID team, so you are going to pilot this too.’ I think we can do it, but we were told more than asked...I'm kind of concerned about that” (personal interview, September 30, 2009). Kelly mentioned, “I think my biggest concern is that this team is already piloting all kinds of stuff and maybe we are not the best people to be asked to do more of something” (personal interview, September 30, 2009).

Confidence shifted a little when teachers were encouraged to change the documentation forms to fit their teams' needs better and when administration listened to their request in keeping the number of student participants to 4 or 5 students. Ben stated, “I also thought that the fact that we were going to be *allowed* to revise the forms as we go along is

very important...I was very glad we were able to just focus on a few students and not tons. ..with a pilot like this, I think it's important that we start of small and work up" (personal interview, February 16, 2010).

Teachers felt that RTI was another "buzz term," a program that was popular right now and would be dropped as soon as another initiative became more popular. It was described as "yet another program" (group discussion February 19, 2010). Teachers doubted that administration would follow and implement this pilot program and initiative with fidelity. Patty summed up teachers feelings when she stated:

There have been so many things that just disappear at the admin level. So, is it really going to be followed up on again? Is it going to be used? We'll make it work for us, for the students on our team, but you know as a school wide initiative...[shakes head negatively]. (personal interview, February 16, 2010)

Ben was already quoted previously about how the RTI pilot program was thrown at them and administration did not take into consideration where teachers were going to find the time to implement it along with the other programs the school is mandating. He was skeptical because by mid-year, he still did not have a specific timeline he had requested at the beginning of the year. Samantha pointed out that the initial meetings were haphazardly planned because their time was consumed by other meetings. Barbara joked that it was another acronym teachers have to learn and be used towards teacher evaluation. When asked to clarify more on her evaluation statement, she said, "...like if I fail at this and I'm unable to do RTI, then it's one other thing that I haven't been able to do in my class...we have all these great things, but it's overwhelming" (personal interview, September 25, 2009). She did state that hopefully teachers could make the different curriculum initiatives fit together under RTI.

These comments along with the challenges faced were brought back to the RTI cadre. It was decided that clear objectives needed to be laid out, a timeline needed to be created (Appendix G), a list of assessments and their purpose needed to be made available, and a reference of interventions and modifications needed to be made available to teachers as a starting point. Once these documents were in place, it was decided that an entire RTI training manual needed to be made to make the professional development succinct, and to give teachers a resource to peruse at the beginning of school so that the RTI process could commence in a timely manner.

Furthermore, the school's infrastructure needed to be changed in order to foster time for team members to focus on RTI in professional learning communities. The RTI cadre, along with administration, designed a new bell schedule. The existing schedule was a 3x3 block, offering three 75 minute classes a day. This allowed teachers to see their students every other day and to also have a non-teaching period every other day (2-3 meeting times per week). The new schedule was based on a 4 block schedule, which enabled teachers to see their students more often (albeit for a shorter period of time for 66 minutes) and to have non instructional periods more often to use for RTI discussion and team planning. As mentioned, administration authorized the creating of an RTI coordinator to oversee data, to facilitate RTI based team meetings, to assist or secure any assessments or interventions needed and to maintain the RTI documentation. This information was shared with the teachers during the third group discussion for their perusal and feedback.

By the end of the pilot program, nine teachers reported feeling supported by administration. Patty did not specifically say if she felt supported or not, but she did talk about the supports that were put in place and ways they could be improved upon the

following year. Ben felt supported as a result of the RTI cadre providing him clear objectives and a timeline he requested and as mentioned previously, the administration allowing teachers to have input in the creation of the pilot program. Five of the teachers felt that the support from the administration was the direct result of the RTI coordinator appointment. Scott reported that he needed someone “on the ball to follow up” on the teachers. David felt that having the RTI coordinator (who was also the literacy coach) present at the meetings streamlined the intervention decision making process and recommended:

I would just like to see frequent follow through of whomever is going to be leading [RTI]- like the reading specialist or math specialist. I think we needed it this year- it was you. You were part of the [RTI cadre], but now that the [cadre] has developed a school-wide process, making sure the math and English department heads are either attending meetings together or that they have access to the team and talking to them about strategies is key. (personal interview, May 24, 2010)

Teachers felt that if the school did not appoint an RTI coordinator or point person the following year, it would hamper the process.

### **Summary of Question One Results**

Working in a PLC to implement RTI impacted teachers’ knowledge, practice and confidence. Teachers became more knowledgeable about RTI through professional development, collaboration and through experience. Their repertoire of interventions and modifications also increased, however teachers acknowledged that more professional development was needed in this area. Teachers also learned that they were not as proficient

in data collection as they would have liked to be and needed clear guidelines to specify what data were acceptable.

Teachers used various assessments in their classroom, but there was little evidence that the assessment results were shared or discussed in PLCs. Similarly, there was little evidence that common practices were shared, but after working with RTI in PLCs, teachers reported that the collaboration helped improve their practice and their relationships with other teachers, students and parents. Teachers also learned the challenges they faced with implementing RTI at the middle level. The time requirements, the amount of students, and the documentation proved to be overwhelming at times.

Teachers also reported more self-efficacy and confidence in their team members. While they felt supported by administration and leadership, they remained skeptical that administration would be able to maintain the level of commitment needed in order to make RTI successful at Aloha Middle School.

**Question Two: How does the implementation of a four tiered Response to Intervention model impact student reading achievement as evidenced by indicators of student progress?**

Interventions discussed in the previous section impacted struggling students. Data taken from the reading assessments specifically addresses the results of the reading interventions; however some of the interventions were not only administered to address reading difficulties, but cognitive, social and emotional skills as well. In the following section, I discuss what interventions were used with specific students and why; the second section addresses the students' responses to the intervention, and the final section presents the students' reading assessment data to illustrate the impact through quantitative data. It

should be noted that while teachers referred to the following steps as interventions, some are modifications and not true interventions.

Several themes arose when analyzing student results. The themes that were noted were: (a) AVID strategies used as interventions, (b) student initiative, (c) student participation, (d) teacher/student relationship and mentoring, (e) parental involvement, and (f) student confidence.

**Interventions implemented.** Because interventions varied amongst students and classes, the types of interventions implemented are presented in graphs based on specific students and then further explained.

*Kayla.* Kayla had several weaknesses teachers chose to focus on and as exhibited, all teachers involved participated in administering interventions as seen in Table 8. In order to work on written communication in all classes, teachers felt Kayla needed to focus on revision. Her writing had many errors in both organization and mechanics, so Ben suggested that all teachers use Step Up to Writing strategies, a highlighting format to help her determine if she had a topic sentence, supplied her main points, supported those points with examples or explanations and closed the paragraph with a conclusion sentence. She would also be allowed to use a peer editor to work on mechanics before submitting her assignment. Furthermore, she would be given extra time to revise her writing.

Kayla was reading below grade level, so it was suggested that in ELA, SS and AVID, she complete AVID critical thinking worksheets when working with challenging texts. This strategy requires students to read a text three times: the first time to find new vocabulary; the second time, to take notes on what each paragraph or section is conveying to the reader; and the third time, for students to reflect on the reading.

Kayla also struggled with math concepts so she was offered afterschool tutoring on Mondays and Wednesdays with the AVID tutor. Kayla would bring her homework to the tutoring sessions to receive support. According to Wanda, if there was no homework assigned on the days they met, they would do practice problems based on the math teacher's recommendations.

Table 8

*Interventions for Kayla, 7<sup>th</sup> grade*

<b>Concerns according to Teachers</b>	<b>Intervention</b>	<b>Administered in/by</b>
Written communication is poor; does not revise or edit- doesn't see she has an issue.	<ul style="list-style-type: none"> <li>• Step Up to Writing (SUTW) strategies</li> <li>• Offered extended time to go back and revise.</li> <li>• offered a peer editor</li> </ul>	-ELA -All classes
Below grade reading level (4.8)	<ul style="list-style-type: none"> <li>• AVID critical thinking worksheets</li> </ul>	ELA, SS and AVID
Struggles with measurements, geometry and spatial sense	<ul style="list-style-type: none"> <li>• Offered an AVID tutor afterschool</li> </ul>	After school tutoring for Math. Tutor to communicate with Math teacher
Internalizes anxiety-introverted	<ul style="list-style-type: none"> <li>• Flexible grouping</li> </ul>	All classes
Does not initiate when she needs help.	<ul style="list-style-type: none"> <li>• Teacher will monitor student and check for understanding</li> </ul>	All classes
Little or no effort to turn work in	<ul style="list-style-type: none"> <li>• Given a webgrader checklist and told to create priority lists</li> </ul>	Homeroom teacher to monitor with parent and student participation

The last three interventions focused on social and emotional skills. In order to get Kayla to participate with her peers more, teachers would work more collaborative learning into their lessons and use flexible grouping. Teachers would also check for comprehension more frequently and prompt her to ask questions. In order to keep Kayla on track with her

work, a Webgrader checklist was taped to her weekly planner as a reminder to check the school's website for any work she may need to complete or make up.

*Paul.* Although Paul was reading below grade level and scoring below proficiency in reading, teachers felt they needed to target his writing skills and behavior as evidenced in Table 9. Ben felt Paul could articulate what he read, but when it came to responding to a text or summarizing it, weaknesses were seen. The first intervention was to use Thinking Maps as a prewriting strategy. This would enable Paul to organize his thoughts and to draw connections in order to aid in written expression. Initially it was only administered in Language Arts and AVID classes (since these classes focused more on writing), but in February 2010, Social Studies also began implementing it due to an increase of writing activities.

Table 9

*Interventions for Paul, 7<sup>th</sup> grader*

<b>Concerns according to Teachers</b>	<b>Interventions</b>	<b>Administered in/by</b>
Difficulty expressing ideas in writing	• use Thinking Maps as prewriting activities	ELA and AR (later this was also done in SS)
	• journal assignments	AVID
Off task	• Teachers tally the frequency of redirections and then conference with Paul	all classes
Social outbursts	• create priority lists	
	• Self-checklist for behavior	all classes

The remaining interventions focused on Paul's behavior. Patty referred to Paul as being "caffeinated" (group discussion, February 19, 2010) and stated that he needed to learn how to calm down in order to stay on task. Other teachers agreed and stated his behavior

was disrupting the entire class. In order to collect data, teachers were asked to tally the frequency in which they had to redirect him and then share this number with him. This provided data to drive a teacher-student conference. Paul was also given a self-checklist which he carried in his binder and was asked to fill it out after each class regarding his behavior. In order to address his missing or incorrect work, teachers asked him to create priority lists in his planner.

**Matthew.** Teachers were concerned Matthew's English language proficiency was affecting his learning and performance as evidenced by teacher concerns in Table 10. While he did not receive ESLL support, the language spoken in his home was not English. Teachers decided to provide Matthew with multiple explanations to: (a) make the instructions clear, and (b) expose him to new vocabulary. To address his low reading level, Ben suggested to the team he be given shortened readings. Patty mentioned that he did not comprehend the shortened reading she had been giving to him and Ben pointed out that she needed to find readings at lower reading levels or lexiles. It was suggested for Patty to use the internet or KidBiz, an electronic resource that had leveled nonfiction reading passages to use for him in Social Studies class. It was also suggested that he be paired with more proficient readers when doing reading assignments so he can be exposed to fluent reading. He was also going to be taught to strategically read and break down constructed response prompts or word problems in order to fully understand what his task was.

To address writing concerns, Ben retaught the SUTW format in a one-on-one session. Matthew was then expected to highlight all his writing to ensure it was organized and fully explained. In Math, the teacher decided to teach Matthew a strategy borrowed from SUTW to help organize word problem answers and constructed responses. Matthew was a

struggling reader, thus reading math prompts proved difficult and his work was “disorganized” as a result. He would write all his computations down in no logical order and not according to the prompt’s directions. Matthew was taught to color code the prompt and then organize his answers into boxes to help organize the different steps in the mathematical problem.

Table 10

*Interventions for Matthew, 7<sup>th</sup> grader*

<b>Concerns according to Teachers</b>	<b>Interventions</b>	<b>Administered in/by</b>
Language barrier concerns	<ul style="list-style-type: none"> <li>Teachers will provide multiple explanations</li> </ul>	all classes
Below grade reading level (4.8)	<ul style="list-style-type: none"> <li>give shortened readings at a lower reading level</li> <li>pair with more proficient readers during reading activities</li> <li>break down prompt or word problem</li> </ul>	ELA, SS  all classes  ELA, Math
Written expression concerns (organization, comprehension and mechanics)	<ul style="list-style-type: none"> <li>reteach the SUTW process and he is expected to highlight all CRs</li> <li>create boxes for math word problem answers</li> <li>use Thinking Map and then follow-up with a summary</li> </ul>	ELA  Math  AR
Not turning in work	<ul style="list-style-type: none"> <li>create priority lists</li> <li>use Webgrader</li> </ul>	monitored by homeroom teacher

Finally in order to address assignment completion, Matthew was asked to check Webgrader daily. He was also asked to create priority lists so he could focus on making up work for one class at a time to prevent him from becoming overwhelmed.

**Jon.** Many of Jon's weaknesses were found in his writing. Teachers felt he lacked fundamental skills in grammar, spelling and punctuation and these errors hindered his ability to communicate his ideas in his writing. What further exacerbated the communication issue was Jon's shyness and since he did not participate in class, Patty reported that teachers had a difficult time assessing whether Jon could comprehend the reading or the assignments' instructions. To address this, Ben asked the literacy coach to provide grammar exercises for Jon to do as extra credit. Ben would award extra credit points to help bring up his low grades on his writing. To work on spelling and vocabulary, Charlene offered to implement the Frayer's model into her daily classroom. Since she was about to teach a biology unit, working with prefixes, suffixes and root words could fit well into her lesson planning and the unit's vocabulary words. Teachers felt these concerns contributed to his ability to convey abstract ideas in his writing, but also mentioned that they could not take away class time to instruct him on usage errors after each writing assignment, so teachers decided to pair him up with a student who was more proficient in writing to serve as a peer editor. The peer editor would review the writing with Jon before he submitted it to the teacher.

Teachers hoped that working with a peer editor would help alleviate Jon's shyness, but teachers also agreed to incorporate more cooperative learning activities in their lessons. In efforts to prevent him from falling further behind in his work, he was asked to create priority lists and use his planner effectively. The homeroom teacher would monitor this.

Table 11

*Interventions for Jon, 7<sup>th</sup> grader*

<b>Concerns according to Teachers</b>	<b>Interventions</b>	<b>Administered in/by</b>
Weaknesses with mechanics (grammar, punctuation, sentence structure)	<ul style="list-style-type: none"> <li>Supplemental grammar exercises</li> </ul>	ELA and literacy coach

Table 11 (Continued) *Interventions for Jon, 7<sup>th</sup> grader*

Poor spelling skills	<ul style="list-style-type: none"> <li>work on prefix, suffix, roots to add in spelling</li> </ul>	Science will take lead to do Frayer's model with vocabulary
Written communication concerns- trouble conveying abstract ideas	<ul style="list-style-type: none"> <li>Pair him with stronger students to be peer editors</li> </ul>	ELA, SS, Science
Socially shy	<ul style="list-style-type: none"> <li>Use cooperative learning strategies in lessons</li> </ul>	all classes
Behind on work	<ul style="list-style-type: none"> <li>priority lists and planner</li> </ul>	Homeroom teacher

**Andrew.** Andrew was chosen to participate in the RTI process because teachers saw great potential in him, even though his performance suggested otherwise. Andrew had been exited from the AVID program for breaking his contract and failing to perform in accordance to the program's expectations. AVID taught study skills and organization, and with the absence of that class, teachers feared his performance would further decline.

While teachers mentioned his spelling weaknesses, during their team meeting, teachers focused on what interventions they would implement in order to address his off task behavior and work ethic as seen in Table 12. Andrew tended to sleep in classes, most specifically Science, so it was suggested that Scott change Andrew's seat to the front of the room. Teachers also discussed redirecting him with humor or with something that might engage him, for example, by asking him a challenging question. It was a concern that a redirection that involved a scolding or warning may cause further disinterest in the class.

Table 12

*Interventions for Andrew, 8<sup>th</sup> grader*

<b>Concerns according to Teachers</b>	<b>Interventions</b>	<b>Administered in/by</b>
Poor spelling	<i>Did not provide</i>	

Table 12 (Continued) *Interventions for Andrew, 8<sup>th</sup> grader*

Does not stay on task (sleeping, daydreaming)	<ul style="list-style-type: none"> <li>• move his seat to the front of the class</li> </ul>	Science
	<ul style="list-style-type: none"> <li>• redirect with an activity that may engage him</li> </ul>	all classes
Does not complete work	<ul style="list-style-type: none"> <li>• conference with him</li> <li>• mentoring</li> <li>• monitor planner (teachers and parent initials)</li> <li>• Tuesday/Thursday study hall</li> </ul>	homeroom teacher

Since he saw his homeroom teacher the most, Samantha opted to take the lead and mentor him on his work ethic. She would have weekly conferences about his time management, monitor his planner to ensure he was writing down his assignments and would also allow him to opt out of the AR reading time on Tuesday and Thursday to complete any missing assignments. Andrew liked to read, so he met his AR goal earlier in the quarter; however, since he met his goal, he had ceased to read and was wasting time during his AR period. Samantha decided he should instead use that time as a study hall period.

**Kate.** Kate's weaknesses centered on quality of work and work ethic. Teachers speculated Kate was disengaged from curriculum because she either did not understand the content or the content simply did not interest her, so time was spent discussing strategies to get her engaged more with the content as seen in Table 13. Wanda suggested that she would do better with small group instruction. Wanda predicted it may elicit more participation and in turn, more comprehension and more motivation.

In Kate's cumulative folder, her elementary school reported she rushed to finish her work and as a result, made careless errors. Teachers felt that if Kate had more time to work on an assignments and if she had more time with teachers, she wouldn't rush through the

work and make these errors. Teachers decided to tailor her advisory period to a needs based study hall. Instead of attending her own advisory class, she would attend the advisory class of the subject teacher she was struggling with most. Once her grade improved, she would either return to her original advisory class or attend a different core teacher's advisory class if she was struggling in a different subject.

Table 13

*Interventions for Kate, 8<sup>th</sup> grader*

<b>Concerns according to Teachers</b>	<b>Interventions</b>	<b>Administered in/by</b>
Lack of motivation	Small group instruction	AVID
Poor quality of work, does not seek out help	Advisory study halls	All classes
Does not turn in work on time	monitor planner	Homeroom teacher

Finally, in order to keep up to date with current assignments, Kate would be asked to use her planner and her homeroom teacher would monitor it to ensure she was writing her assignments in it.

***Kiana.*** Teachers were concerned that Kiana was not turning in work because her reading comprehension was interfering with her ability to complete her assignments and put interventions into place to address this as seen in Table 14. Kelly said she was already doing many AVID critical reading activities in her class that should support Kiana, but would do more frequent comprehension checks with Kiana to see if she needed any help. Kelly suggested that other content teachers also pair Kiana up with proficient readers for think-pair-share discussions after reading a text. Teachers also suggested Tier 2 suggestions immediately in the form of afterschool tutoring. Unfortunately Kiana could not get into the afterschool tutoring the school offered because she had missed the enrollment date, so Samantha offered to monitor Kiana. Samantha stayed afterschool to tutor students in math,

so if Kiana could use that time for AR reading (independent reading), Samantha felt she could monitor it. The team felt that any practice reading was better than nothing and that exposure to text would help improve Kiana's comprehension.

Table 14

*Interventions for Kiana, 8<sup>th</sup> grader*

Concerns according to Teachers	Interventions	Administered in/by
Reading below grade level (5.4)- comprehension issues	<ul style="list-style-type: none"> <li>• more support in ELA</li> <li>• pair her up with a proficient reader for think-pair-share activities</li> <li>• After-school tutoring to work on AR</li> </ul>	ELA  all classes  Math teacher (Samantha) would monitor her
Not turning in work	<ul style="list-style-type: none"> <li>• Advisory study halls</li> </ul>	All classes

**Mike.** Determining Mike's weaknesses was challenging for the team of teachers and multiple interventions were put into place as seen in Table 15. When they initially sat down, Kelly stated Mike could not read. Later, when historical assessment data on Mike was presented to the team, they learned he had scored a 298 on his Spring 2008 HSA in reading and while this is not considered proficient, it did not indicate severe reading problems. Similarly, his GMRT score from August 2009 was 7.4, just below the 8.0 target grade equivalency. Kelly stated, "I'm baffled. I would have never expected that" (group discussion, February 22, 2010). Since the assessments were primarily multiple choice, teachers discussed he may do well on multiple choice questions, but based on his performance in class, they decided they needed to focus critical thinking and literary response questions. The first intervention they would try was to provide him with targeted questions when reading a text. Kelly felt this would help direct his reading more. Secondly,

the AVID teacher agreed to have him do learning logs in AVID so he could practice writing and recalling what he had learned. Kelly, who was also his homeroom teacher noted that while he read during the AR period, he had yet to pass one AR quiz, which conflicted with the teams' original assumption that he did better on multiple choice questions. Kelly agreed to have him take more detailed Cornell notes while reading, so she could monitor his comprehension and note-taking skills. She would also allow him to take these notes to the computer when he was ready to take the AR quiz. It was also noted that Mike was enrolled in the school's afterschool tutoring, so teachers would make contact with his tutor to keep her abreast of his progress and activities he needed to work on more.

Table 15

*Interventions for Mike, 8<sup>th</sup> grader*

<b>Concerns according to Teachers</b>	<b>Interventions</b>	<b>Administered in/by</b>
Comprehension concerns: fluctuating performance	<ul style="list-style-type: none"> <li>• Give him targeted questions prior to reading</li> <li>• Cornell notes during reading</li> <li>• After-school tutoring</li> </ul>	All Classes AR and ELA 21 <sup>st</sup> Century Tutoring
Language concerns which affects following directions and writing	<ul style="list-style-type: none"> <li>• Teacher to ask him to repeat instructions</li> <li>• Provide him with sentence starters from SUTW</li> <li>• Journaling</li> <li>• complete learning logs in AVID</li> </ul>	Special Education Teacher all classes ELA AVID
Exhibits anxiety	<ul style="list-style-type: none"> <li>• Monitor planner</li> <li>• Journaling and mentoring</li> </ul>	Homeroom teacher ELA
Home issues	<ul style="list-style-type: none"> <li>• Journaling and mentoring (same as above)</li> </ul>	ELA

Teachers cited times when Mike could not comprehend instructions and initially, they presumed there may be a language barrier hindering his progress. Teachers did know that English was not the language spoken in his home. As an intervention, Barbara agreed to verbally prompt him to rephrase the instructions. She felt by doing this, she would be able to assess his comprehension, as well as redirect him prior to him completing the assignment incorrectly and wasting his time. It was also suggested that teachers allow him to use sentence starters from SUTW when responding to a text or doing a writing assignment. Teachers felt this may help with his writing. Finally, Kelly stated that she would initiate journaling with him; he would journal and then she would respond to him creating a written mode of conferencing. She hoped this would help him practice expressing his ideas in writing and since it was personal in nature and would not be graded, it would be a less threatening way of practicing. The teachers also mentioned that this may help relieve his anxiety issues and share his feelings about what was occurring at home.

To further address his anxiety, teachers felt it was best if he could be up to date on his assignments. He would also be asked to maintain his planner and use it effectively.

***Tamara.*** Tamara struggled with math and Samantha was concerned she would fail for the entire year. Historical data showed significant concerns in certain math skills. In following the interventions decided for the other students, Samantha felt Tamara would benefit from attending math class in lieu of advisory class, so support could be given if Tamara struggled with her math assignments. A list of her prescribed interventions are presented in Table 16.

Other teachers were concerned that Tamara was not turning in her assignments. Teachers wondered if the work was not being turned in as a result of comprehension

concerns, motivation or both. Kelly felt that comprehension was the root cause and stated that she had done one-on-one readings with Tamara and felt that helped. Since this is not always feasible in a class of more than 30 kids, Kelly suggested to Wailani and Scott that Tamara be provided leveled textbooks and readings so Tamara could still learn the content, feel as if she could contribute to class discussions and complete her assignments.

Finally to address completing her assignments, she was also asked to use her planner and have her mother initial it.

Table 16

*Interventions for Tamara, 8<sup>th</sup> grader*

<b>Concerns according to Teachers</b>	<b>Interventions</b>	<b>Administered in/by</b>
Poor math skills (operations, geometry, patterns, functions and algebra)	<ul style="list-style-type: none"> <li>• Math advisory tutoring</li> <li>• PLATO</li> </ul>	homeroom/math teachers Math
Comprehension concerns	<ul style="list-style-type: none"> <li>• leveled texts</li> </ul>	Social Studies and Science
Completing assignments	<ul style="list-style-type: none"> <li>• monitor planner</li> </ul>	homeroom teacher

**Summary of students' responses to interventions.** Since a few of the students had common interventions, their responses to the interventions administered are grouped in order to compare and contrast the results. This section focuses on academic interventions first and then interventions focusing on the students' social and emotional skills.

The first theme noticed was how teachers utilized AVID strategies such as critical thinking worksheets and Cornell notes in order to target critical reading. Kayla had to complete critical thinking worksheets and she did complete these worksheets when they were supplied for her. She did well completing the worksheets, which indicated she comprehended the text at hand, but teachers were unsure if she was able to transfer the skills when there was no worksheet involved. Patty stated that when Kayla turned in her

worksheet, she was very proud of herself because it was the first assignment she had turned in all year. Ben reported that Kayla's constructed response scores rose to 4/4, which may indirectly be a result of these worksheets. Mike was asked to complete Cornell notes while doing his AR. Kelly stated that he could not pass an AR quiz even when she read with him, however after implementing the Cornell notes intervention, Kelly reported that Mike achieved a 100% on his first AR quiz.

Two of the students, Matthew and Tamara had interventions that involved shortened or leveled texts. When Ben gave shortened and lower leveled texts to Matthew, he did well, but Ben felt that he still needed to lower the reading level of the text. Ben said that "vocabulary was still an issue. He got through the text, but did he really understand it? I'm not sure" (personal interview, March 3, 2010). Tamara was given leveled texts in Social Studies and Wailani said, "It is *really* helping" (group discussion, April 5, 2010). Scott said he gave Tamara only one reading that was leveled and he felt that spurred her on because , "she has been turning in all her work" (group discussion, April 5, 2010).

Teachers felt some students needed intensified support and decided that these students should have afterschool tutoring, which is a Tier 2 intervention, immediately. This had mixed results depending on which teacher managed the tutoring. Kayla was seeing an AVID tutor for math. Wanda reported that Kayla was attending tutoring regularly, but the math teacher reported that while her assignments were now being turned in regularly, there was no improvement seen in understanding; she was still making errors. She was, however, very receptive to taking the incorrect work back to the tutor to revise it. Mike was in the school's afterschool tutoring and because it was run by a different instructor, the team teachers received no information regarding what interventions were implemented at the

tutoring sessions and if he was responding to them. While teachers could have sought out the information, they did not. This shows they limited their scope of RTI interventions and data to their own PLC and did not seek outside support for data. As a result, teachers could not determine if Mike's reading performance was responding well to this intervention. Finally, Kiana had afterschool tutoring with Samantha for AR. Samantha reported that Kiana showed up and read, but once she was able to take an AR quiz, Kiana stopped reporting to tutoring. The extra time did help Kiana improve her AR grade though.

Mike was also given guided questions to help focus his readings. Kelly said this really helped her pinpoint which parts of the text he still had problems comprehending. This helped her support him better. Science also implemented this and Scott noticed an improvement. After this was implemented in science, Scott said Mike raised his grade from an F to a 68% (group discussion, May 20, 2010).

Teachers also used collaboration as a reading intervention. Strategies like Think-Pair-Shares, reciprocal teaching or AVID's Writing, Inquiry, Collaboration and Reading (WICR) strategies were used in Tier 1. It was reported when Matthew was "paired with higher ability leveled peers, he can read and understand better" (group discussion, April 14, 2010). Kiana also benefitted from more collaborative learning strategies. In response to implementing Think-Pair-Shares in math and social studies classes, Samantha stated Kiana was "initiating support from her peers" (group discussion, April 5, 2010).

Teachers noted that when they administered interventions to those who struggled with reading, written communication improved as well. Teachers administer constructed responses, questions that require students to respond to a prompt or question and write out their responses in expository paragraphs. Several teachers noticed students improving in this

area. Paul was asked to complete Thinking Maps as a prewriting activity and Ben reported that his constructed responses showed a “huge improvement in structure and process” (personal interview, April 26, 2010). Even though Matthew moved onto Tier 3, Ben reported that Matthew’s constructed response scores improved significantly from a 0/4 to a 3/4. Jon, who also struggled, made gains in written expression. Ben spoke about Jon’s performance in fourth quarter:

He got a 3/4 on the last constructed response which is pretty good. There is still the typical grammar things where he won’t capitalize the first letter in the sentence and often runs sentences together, but with the actual content, you can tell he actually understood the question...the content shows comprehension. (group discussion, May 21, 2010)

The team of teachers noted that while Jon and Matthew’s efforts improved, the students still struggled with vocabulary. During a February meeting, teachers discussed Jon’s weakness in spelling. Most of his words were spelled phonetically which led teachers to believe this created a problem with reading as well. Even though Jon completed his prefix, suffix and root activities in Charlene’s class, teachers felt this did not have a significant impact in his spelling skills. When the teachers met again in April, spelling still had not improved.

Ben mentioned that Matthew exhibits word confusion in his speech as well as his writing:

There is still a language issue where he needs to be engaged in conversations and encouraged to constantly rephrase what he says because oftentimes, the first thing he will say is the wrong word. He confuses a lot of things to the

point that you cannot understand what he is saying. Vocabulary is still a concern. (group discussion, May 21, 2010).

Patty pointed out English was not Matthew's first language and it was not spoken at home, she surmised he was not exposed to English vocabulary, grammar and texts at home. Patty recommended that he receive grammar tutoring, focusing on subject /direct object usage.

Two students, Matthew and Mike were retaught SUTW format and strategies were used to help improve writing. Ben reported Matthew's progress on his constructed responses (CRs) to be poor in March, but in May he had improved and was scoring 3/4s on his CRs. It was planned to give Mike SUTW sentence starters to help prompt his writing, but instead, Wailani used pictures. Wailani stated that his writing was full of "creativity, imagery and historical perspective" (personal interview, March 5, 2010). She surmised that providing a "prompt is key" when supporting his writing.

Collaboration was also used to help improve writing skills. Jon was given a peer editor in classes to help improve his writing and there was little response. In social studies, no improvement was seen. In ELA, Ben felt the pairing was good because it improved content, but Jon did not follow the editing advice. In Science, Charlene found Jon turning to her for editing help rather than his peer editor. Kayla also received a peer editor and teachers did see positive results. Ben stated that since implementing this, Kayla received 4/4 on two of her CRs and while she was making some mistakes, there was evidence that she was revising and reviewing her work. Patty noticed that Kayla turned in her matrixes (a writing assignment) on time and the work was better when she had her peer editor.

Wailani reported that Mike's writing improved which also spurred his self-confidence to the point he wanted everyone to read his final paper. Barbara mentioned his willingness to share his writing as well.

The improvement in written assignments correlated with how students processed and followed instructions. Four students specifically; Jon, Matthew, Paul and Mike, struggled with multistep directions. These students were instructed how to organize their assignments and writing into specific steps, each step following one specific instruction. Ben commented that during a speech writing unit, Paul followed directions, aligned his work to the rubric and practiced "*a lot*" to receive a 40/40 on his speech.

Mike and Matthew were noted to have language barriers, so the modification of providing instructions in different forms was critical. Patty stated that although Matthew still had some communication weaknesses, he made more attempts to get clarification on work beforehand. With the quality of his work improving, Matthew brought his grade in Social Studies up to a C.

The only student who was administered interventions regarding directions was Mike. Barbara, the special education teacher on the 8<sup>th</sup> grade team, was designated to prompt Mike in classes when instructions were given out. She would ask him to repeat the instructions verbally before writing them down and Kelly, Wailani and Barbara commented on the quality his work improving. Barbara stated that Mike could accurately relay the instructions 2 out of 3 times. Scott mentioned that it was still taking Mike a while to keep up with simple concepts in class and as a result of Mike taking extra time to process and deconstruct the instructions, he tended to rush in completing the assignment.

Becoming a “Self Directed Learner” was one of Hawaii’s General Learner Outcomes and in order to do this, organization and follow through were skills teachers felt these specific middle school students needed to improve upon. This was the second theme noticed since teachers explicitly taught students how to be organized, set goals and foster responsibility. As an intervention, the seventh grade teachers required Jon, Kayla and Paul to create daily lists of tasks and assignments to do in order to raise their grades in all their content areas. Matthew was not mandated to do this, but he had to maintain his AVID binder and planner along with the other students. Charlene stated that the amount of work that was turned in by these three students was a big improvement over the beginning of the year. David was impressed with the team’s ability to support Kayla:

[She] wasn’t getting her work done, gave a lot of excuses [and it was] basically task avoidance... because she, perhaps, was struggling with something and wasn’t able to do the work, so she became disengaged. I think the teachers did a pretty good job of realizing it was more of a remedial problem than just regarding it as laziness and that changed the way they handled her and that in and of itself- recognizing that it wasn’t just a behavioral or a defiance issue helped. (personal interview, May 24, 2010)

There was one discrepancy regarding Jon. While he was improving in turning in all his work for science, social studies and math, Ben reported that even though Jon was creating his lists and being monitored, often he would forget to look at his list, leading to missing assignments and unpreparedness in Language Arts class.

Teachers also commented on students' self-initiative. The teachers were very proud of the initiative Matthew exhibited. Originally Ben had been worried that Matthew would have felt singled out by his interventions:

... certain interventions sound better on paper and to parents-and I don't doubt that they are great and would yield great results- but in practice, it is very difficult at the middle level to single out a single student without embarrassing him or her or creating a feeling of unjustness in the class. Middle school kids notice those differences. (group discussion, May 21, 2010)

Even with this concern, Ben noted that Matthew continued on with the interventions even when he was not specifically instructed to. Ben was impressed that Matthew "took it upon himself" to do continue on with the interventions. Charlene noted that Matthew was awarded the "Most Improved Student" for science and said that he "really grew up" (group discussion, May 21, 2010).

Wanda noted that Kayla did not need reminders to attend tutoring for math and when she did attend tutoring, she came prepared with activities in which she needed help. As a result, Kayla was awarded "Most Improved Student" for math.

One of Paul's interventions focused on his off task behavior. Teachers were asked to tally how many verbal reminders they needed to give Paul and then discuss this with him after class. This had moderate success. Ben mentioned that Paul was occasionally off task, but "way faster to realign himself with just a look or a nod, I think that goes back to the fact that he knew he was being watched. Now with a small glance, it has an effect, whereas before it hadn't had an effect. He snaps back to work right away" (personal interview, May 29, 2010). Ben also felt that Paul knows teachers are observing him more closely due to RTI

and for this reason; he is trying to be more focused. Patty also felt that Paul matured and stated that he is quicker to pick up on nonverbal clues, which has helped his interactions with his peers as well as his teachers. She also spoke about a time she returned incorrect work and he admitted he could produce better work. Wanda felt Paul still struggled with this in her class, but she admitted that her larger class size may have been a factor leading Paul to be off task more.

Ben and David felt that Jon still had a “level of immaturity” about him directly and this was the result of him assuming he could get by without putting in the proper effort in his interventions. However, Charlene and Patty disagreed. They felt he was actively seeking help which showed an increase in effort.

While the seventh grade team experienced success in general with student organization and follow through, the eighth grade team experienced mixed results. Instead of priority lists, eighth grade students were instructed to write assignments in their planner and then get the planners signed by the teachers and parents. Kiana and Mike showed consistent improvements when asked to monitor their planners and priority lists. Tamara showed moderate success in Science and Language Arts, but slipped in Math and Social Studies. Andrew never showed weaknesses in Social Studies, but according to Samantha, his homeroom teacher, he failed to follow through on any of his planner checks in the other subjects.

In terms of self-initiative, results were mixed. Teachers noted Andrew was off task often, even sleeping in classes. Wailani saw “trends of laziness,” but she would use humor to redirect him. Samantha noted that he left his “stuff everywhere” and she had to give him frequent reminders to retrieve his belongings and assignments.

Kate was doing well, but her grades started to fall in certain classes during the fourth quarter. Scott believes Kate's motivation waned because the interventions were at their peak in third quarter, but "then the novelty wore off and she kind of got used to it" (personal interview, May 27, 2010). Samantha said that Kate simply "stopped doing work." Kate experienced success in Social Studies as a result of her Tier 2 individualized tutoring and she also did well in Language Arts class.

Tamara exhibited results similar to Kate. She started off doing well, but then failed to follow through with her interventions. One of her Tier 2 interventions was small group tutoring for math, but she stopped going. She did well in Social Studies as a result of using a 4<sup>th</sup> grade leveled textbook as a modification.

Unlike Kate and Tamara, Kiana was reported to have made good progress and taking the initiative to get all her work turned in. Samantha said that Kiana "rushed to get all her work in at the end, but she got it in" (personal interview, May 27, 2010).

Mike's ability to be self-directed was not consistent. As mentioned previously, one of his interventions was to work with Barbara, the special education teacher, in verbally explaining the instructions to ensure he understood the lesson's task. Barbara reported that he was able to effectively reiterate instructions 2/3 times (group discussion, April 5, 2010). While he showed success in the classes in which this was implemented, the classes in which it was not, showed little improvement. Scott said, "It takes [Mike] a while to keep up with simple things. He does the assignments but rushes through things. Not sure if it's anxiety or due to laziness or both" (personal interview, May 27, 2010). Barbara expressed that he still had trouble "handling things even with lots of reminders...and that's one of my concerns for

him next year, that he is just not [going to] turn his work in” (personal interview, May 24, 2010).

Samantha believed this lack of motivation from Tamara, Andrew and Kate stemmed from the school’s promotion policy for math. If students failed the first semester, they would automatically have to go to summer school. The pre-algebra class was designed as two half credit courses, yet the students needed an entire credit to be promoted for math. If the students’ parents could not pay for summer school, students would be left back. Tamara, Andrew, Kate and Kiana failed first semester and were going to summer school. Kiana, however, continued to turn in assignments and make up work even though she was mandated to go to summer school.

Many of the eighth grade students had the intervention of an advisory pullout tutoring session. This too, had mixed results based on the students’ self-initiative and motivation. Kate did really well. She was able to bring her grade up to a B and then was asking to be switched to ELA in order to work on bringing up her grade in that class. Unfortunately, Kiana and Tamara did not have the same results. It was reported that Kiana needed more one-on-one support. Kelly stated that she could not sit with Kiana one-on-one since she had to also manage her advisory students and if she did not prompt Kiana to do something specifically, little work was done. Kelly then decided to call Kiana into her advisory class when her class was doing independent work. This would allow Kelly to offer Kiana more personal support. This did help. Teachers experienced a similar problem with Tamara. Advisory sessions were not working because Tamara needed more support and direction. Samantha modified the plans and Tamara came in Tuesday and Thursdays after school to

work. She would attend the afternoon sessions, but Samantha reported that Tamara still failed to turn in the work (personal interview, April 26, 2010).

While the motivation to turn in work was not consistent, motivation to participate was, yet another theme that became evident during this study. With the exception of Kayla in Social Studies class, it was reported that all student participation increased. In reference to Kayla, Ben stated he had seen “an increase in focus, a lot more motivation and participation as a result of this process” (personal interview, May 29, 2010). Patty reported that Jon’s participation increased and he became more social when it came to group activities. Wailani stated that Kiana participated more in cooperative learning groups. When Kiana had to write her reflection in Social Studies, Wailani said she wrote, “I never used to talk to anyone, but now there is no one I won’t talk to” (personal interview, May 25, 2010).

With additional teacher support and increased participation, students were able to foster better relationships in their classes, which was the fourth theme noted. Charlene, Patty, Ben, Wailani, Barbara and Ben spoke about how students were opening up to teachers and how mentoring helping improved their relationships significantly. Charlene spoke about Jon “coming out of his shell” and Patty talked the need for Kayla and Jon to loop with the same teachers so they “don’t shy away again” (group discussion, May 21, 2010). These relationships allowed teachers and students to find areas the students excelled in and were interested in. Jon completed an engineering project where he built a model plane and won a contest for longest flight. Patty realized he “has pockets of interest and knowledge...and his sense of humor is huge” (personal interview, May 27, 2010). Andrew struggled with many classes, but he excelled at music and informed teachers that he idolized Lady Gaga. Wailani used Lady Gaga examples in her lessons to catch his interest and the teachers asked Andrew

to organize and deejay the team's end of the year celebration. Barbara said that he "had found his calling" (personal interview, May 24, 2010). As mentioned previously, Mike opened up to Kelly in his journaling about his hearing problems. A referral was made to the nurse immediately in order to receive medical support and hearing testing.

The fifth theme that arose involved parental support. The relationships that fell short of expectations were those that involved parents and guardians and this occurred for various reasons. All parents were notified that their child was going to be a participant in the RTI pilot program and that all information was available to them if they wanted it. Only one parent, Jon's father, asked to see the interventions and data about his son. Matthew's parents failed to show at three of the scheduled parent/teacher meetings. At the end of the school year, we found that Mike's father had not been informed of the process. Samantha noted, "Mom was not communicating to the dad. I think he was getting his other guardian to sign his forms and paperwork. I'm not sure who this other guardian is, but turns out, his dad wasn't receiving any of our notices" (group discussion, May 20, 2010). We also learned that Kate's guardian, her grandmother, was busy with adoption procedures for Kate's younger sisters, leaving her little time to focus on Kate.

For those students who were asked to make priority lists and use their planner, parents were asked to monitor them as well and sign the planners/lists nightly. This did not happen and teachers thought having parents check nightly was too burdensome, so parents were asked to check weekly. Parents were very responsive and willing on the phone or during meetings, but follow through was not consistent. Samantha said she often had to call parents to remind them of the plan as well as the students. When discussing Andrew,

Samantha stated, “The parental side of it is not working out. Mom says, yes, great, but I’ve kind of hit a wall” (personal interview, February 16, 2010).

With performance, participation and relationships improving, teachers observed higher levels of self confidence in students and this was the final theme noticed. All of the seventh grade teachers commented on how Kayla grew more confident. When gathering historical data on Kayla, it was reported in elementary school that Kayla’s anxiety would manifest physically and cause her to pick at her skin. Teachers did not see any physical manifestations during the RTI pilot program, but at the start of the study, they did state she internalized problems. By the end of the study, her RTI documentation read, “Because she is getting afterschool tutoring, she seems more positive about her work. More self-directed behavior noted, more independent and more participatory in class discussions- confidence boost.” Charlene spoke about a specific classroom incident that exemplified Kayla’s confidence:

I saw her confidence improve when she stuck with an answer even when the others gave a different answer. Previously, she probably would have just caved in and gone along with them, but this time, she didn’t. (personal communication, May 27, 2010)

Patty compared Kayla’s confidence to her confidence in the beginning of the year and stated that because it took Kayla longer to figure out how to proceed with an activity, her confidence suffered. By the end, this was not the case. David also spoke about academic issues related to her confidence levels:

I think [Kayla’s concerns] were more motivational issues but that was due to some deficiency issues going on with her schooling... she’s definitely slower

in some areas and then you get to middle school and that complex starts to build and people start to recognize you as being as either “with it” or kind of on the outskirts, and then all the behavior stuff comes up. (personal interview, May 24, 2010)

Wanda also noted that Kayla’s confidence boosted, but expressed concern that she still needed reading and writing support. The fact that Kayla opted not to continue on in the AVID program was a concern.

Teachers also observed more confidence in Jon. Patty felt that with his increased participation and him becoming more social in group projects, he become more “comfortable” in class.

Increased confidence was seen among 8<sup>th</sup> graders as well. It was reported that Mike experienced anxiety in his Language Arts, AVID, and Social Studies classes, but by the end of the pilot program, the teachers did not see this same anxiety. Mike exhibited more confidence in his writing. As mentioned previously, Mike struggled with written communication and by the end of the year, he was boosting his writing. Kelly mentioned that he wanted to read his journal aloud in class which did not happen in the earlier part of the year. Wailani said, “...in the end, when we were doing our final writing, he was so proud. He just wanted to read it to everyone” (personal interview, May 25, 2010). During a classroom observation, he also approached me and commented on how proud his teachers were of his writing. Scott did comment however, that Mike experienced some anxiety in Science class, especially when he started falling behind.

Kiana was also noticed to have gained confidence in her learning. Wailani felt Kiana’s confidence stemmed from gaining skills and gaining trust in her classmates. In both

Social Studies and Math she was initiating support from peers during think-pair-share activities.

Kate also showed marked improvement. Wailani said, “In the beginning of the year, my goodness, she wouldn’t even talk, but by the end of the year, she was leading the group. Her confidence levels went way up” (personal interview, May 25, 2010). When I inquired why she thought Kate’s confidence went up, she compared Kate to Kiana and said, “I think she grew more confident in reading. I think she is similar to how Kiana was, like, ‘Now I feel like I can contribute’.”

By providing reading interventions, reading performance and confidence improves and when study skill interventions and time management is taught, students benefit academically, cognitively, socially and emotionally.

**Reading assessment scores.** Of the 7<sup>th</sup> graders, 75% increased on their HSA and 50% increased on their GMRTS, so overall, student participants’ reading assessment scores improved throughout the course of the RTI pilot program. Table 17 presents the students’ assessment scores. Teachers used the students’ Spring 2009 HSA reading score and compared it to the Spring 2010 score to determine if there was an improvement. A score of 300 was considered proficient for the HSA. This assessment was a criterion-based test and assessed reading on three areas: reading comprehension, literary response and analysis and conventions and skills. The Gates MacGinitie Reading Test was administered to students and scores were analyzed in August 2009 and January 2010. This assessment assessed students’ vocabulary and comprehension skills. Scores seen below indicate the overall grade equivalency the student demonstrates in reading. Tables 4.9 and 4.10 show the quantitative data for student participants.

Table 17

*7<sup>th</sup> Grade Student Participant Reading Assessment Scores*

<b>Name</b>	<b>HSA Spring 2009</b>	<b>HSA Spring 2010</b>	<b>GMRT August 2009</b>	<b>GMRT January 2010</b>
Jon	292	283	6.1	5.1
Matthew	259	301	4.8	4.5
Kayla	273	315	4.8	6.7
Paul	273	306	4.5	5.1

As exhibited, three of the four 7<sup>th</sup> grade students met reading proficiency at the conclusion of the RTI pilot program and prior to the pilot beginning; all four were performing below proficiency. Jon's score decreased, which indicated he was not responding well to the interventions provided and more were needed. He also did not improve on the GMRT grade equivalency. At the end of the school year, it was determined that Jon would be enrolled in the school's reading intervention class, READ 180 for additional support during his 8<sup>th</sup> grade year. This is a Tier 3 intervention which requires a curriculum change in addition to the Tier 1 and Tier 2 interventions he would be receiving in the classroom. Articulation with his new teachers was planned to pass along information and data the 7<sup>th</sup> grade teachers collected on Jon.

Matthew improved greatly on the HSA. Although Matthew reached proficiency on the HSA, his GMRT scores indicated there were no gains. The teachers used quantitative data and classroom observations to determine the need for Tier 3 interventions for Matthew. While he did respond well to interventions, teachers felt more support was needed to continue this improvement. Patty stated what while he made "small progress" there were still "communication issues" that need to be improved upon (group discussion, May 21, 2010). He too was enrolled in READ 180 for the following school year.

Both Kayla and Paul showed gains in both standardized assessments. It was determined that they both responded well to interventions based on their quantitative data. Based on this data and teachers' observational data (which will be discussed further in this section), Kayla and Paul were exited from RTI at the end of the school year. Their subsequent teachers would be informed what interventions were done with these students that proved successful, but data collection and documentation would cease.

Overall, the gains seen for some the 8<sup>th</sup> grade students' scores were notable as seen in Table 18. Again, since 300 is considered "meeting proficiency", at the beginning of the pilot program, three of the five students were scoring proficient on their HSA in reading. Two of those students barely made proficiency. At the end of the study, all five students met proficiency in reading. Only one student, Kate, decreased on the HSA, but it was a minor decrease and her score was still above proficiency levels.

Table 18

*8<sup>th</sup> Grade Student Participant Reading Assessment Scores*

<b>Name</b>	<b>HSA Spring 2009</b>	<b>HSA Spring 2010</b>	<b>GMRT August 2009</b>	<b>GMRT January 2010</b>
Andrew	301	325	6.4	8.9
Kate	338	322	6.4	7.9
Kiana	284	306	5.4	6.4
Mike	298	306	7.4	7.9
Tamara	301	312	4.8	5.8

All students increased on the GMRT, however, four of the five were considered below grade level. While Mike increased on the GMRT, the gains were not significant enough for teachers to feel he would be successful without continuing the RTI process. He did better on multiple choice questions but when open-ended questions still posed a problem. Kelly felt that he still exhibited weaknesses grasping abstract ideas and concepts in reading.

Continuing RTI posed a problem for the 8<sup>th</sup> grade team since these students were graduating to high school and additional support could not be offered past the current school year.

### **Summary of Question Two Results**

Teachers chose various interventions in order to improve academic skills, as well as social and emotional skills. Through collaboration, teachers targeted specific weaknesses in students, determined what interventions could help, implemented the interventions, collected data on students' responses to these interventions and then analyzed the data to determine if the interventions were successful. While reading assessment scores indicated the interventions to be successful, teachers' observation and data took precedence and these showed mixed results. Certain factors such as student initiative, parent involvement and resources outside the classroom also contributed to the results.

### **Summary of Overall Results**

The purpose of this study was to examine the impact of the implementation of a four tiered RTI model on student reading progress as evidenced by indicators of student progress. It also assessed whether participating in professional learning communities (PLCs) influenced the RTI process and ascertained which factors contributed to the change in classroom teacher efficacy.

Working in a PLC to implement RTI impacted teachers' knowledge, practice and confidence. Teachers became more knowledgeable about RTI through professional development, collaboration and through experience. Teachers reported using additional interventions and modifications, yet teachers acknowledge that more professional development was needed in this area. Teachers also requested further professional

development in data collection and clear guidelines to specify what data was expected and how to analyze it.

Working in PLCs impacted teachers' practice in a positive manner, especially in collaborative practices. Teachers used various assessments in their classroom, but there was little evidence that the assessment results were shared or discussed in PLCs. Similarly, there was little evidence that common practices were shared, but after working with RTI in PLCs, teachers reported that the collaboration helped improve their practice and their relationships with other teachers, students and parents. Teachers also learned the challenges they faced with implementing RTI at the middle level. The time requirements, the amount of students, and the documentation proved to be overwhelming at times.

Teachers also reported more self-efficacy and confidence in their team members. While they felt supported by administration and leadership, they remained skeptical that the school would remain committed to making RTI successful at Aloha Middle School.

Implementing the RTI process also appeared to impact student performance academically, socially and emotionally. Through collaboration, teacher targeted specific weaknesses in students, determined what interventions could help, implemented the interventions, collected data on students' responses to these interventions and then analyzed the data to determine if the interventions were successful. Reading assessment scores indicated the interventions to be successful; however, teacher observation and classroom data determined if the interventions were successful.

When teachers participated in PLCs while implementing RTI, it promoted teacher reflection on their knowledge, practices and confidence. PLCs also nurtured relationships between colleagues and from working together, teachers found the value and importance of

creating relationships with their students. These relationships with students contributed to student confidence and performance. Finally, teachers used results to determine if their efforts and interventions were successful, which helped drive curriculum decisions.

## **Discussion and Recommendations**

### **Introduction**

The purpose of this study was to determine the impact of the implementation of a four tiered RTI model on teachers' knowledge, practices and confidence, and to ascertain what factors led to changes in these attributes. Furthermore, the study assessed if participating in Professional Learning Communities (PLCs) influences the RTI process and to what extent. Finally, the study examined the impact of the implementation of a four tiered RTI model on student reading progress as evidenced by indicators of student progress. The specific questions that guided the study include:

1. How does implementing an RTI process within a Professional Learning Community influence teacher knowledge, practice and confidence regarding struggling readers?
2. How does the implementation of a four tiered Response to Intervention model impact student reading achievement as evidenced by indicators of student progress?

These questions were important to investigate because if implementing RTI within a PLC helped drive professional development, improve teachers' instruction and practice and builds teacher efficacy, students would benefit. However, RTI is fairly new to states, districts, schools and teachers. If RTI could be successful in a large middle school, it could serve as a model for implementing RTI in other middle schools. Aloha Middle School's RTI process was based on research which showed that when interventions are implemented at the middle level, they yield significant results in struggling secondary students and have a higher success rate than students who receive interventions at the high school level (Center on

Instruction, 2007). The results from the teacher interviews, the teacher group discussions, observations and student assessment data discussed in the previous chapter suggest that implementing RTI at the middle level not only benefits students' reading abilities, but their social and emotional skills as well, and moreover, it has positive effects on teacher knowledge, practice and confidence.

This chapter presents theoretical implications of the findings in terms of the research questions. Next, practical implications are given to describe how the theoretical assumptions can be translated into educational practices. Finally, recommendations for future research are offered to provide direction on future studies in the area of RTI studies and specifically, RTI at the middle level.

### **Theoretical Implications and Recommendations**

This section presents discussion and interpretations of each research question and the themes that were posed in Discussion of Results chapter. The findings are posited with theories and literature presented in the Review of Literature chapter, as well as the theoretical framework of reading acquisition.

### **Research Question One**

There is compelling evidence for the initiation of research in regard to the implementation of RTI at the middle school level. While RTI seemed like a viable solution for school and student improvement, at the time of this study, it had not been implemented in any of the middle schools in this particular district in Hawai'i. The novelty of this process warranted professional development and adjusting educational practices in the school and the classroom; however, with little research and literature on RTI at the middle level, it was difficult to determine best practices at that point. The purpose of this question was to

determine how RTI impacted teachers' knowledge, practices and confidence and from these results, make recommendations to the proposed RTI process before implementing it school-wide.

**Knowledge.** The site school, Aloha Middle School, had just regained autonomy at the time of the study and for the previous three years had been under the supervision of a mainland educational curriculum provider. When the provider left, the administration and teachers became empowered and took on the task of designing an assessment and professional development plan and also implementing curriculum initiatives and instructional decisions. RTI was one of the educational initiatives the school leadership team wanted to pursue, however, as seen in Chapter 4, few teachers were knowledgeable about the purpose and process of RTI.

In order for RTI to be successful, teachers must see its value and see success and in order to do that, general education teachers must feel supported in implementing interventions. Teacher participants felt knowledgeable about the RTI process once the study was completed, and this was the direct result of collaborative, ongoing and job-embedded professional development (Clark & Hollingsworth, 2002; DuFour, DuFour, Eaker & Many, 2006; Hord & Sommers, 2008; Thibodeau, 2008; Wayne et al., 2008).

Working in the newly formed PLCs contributed to the success of the RTI pilot program. Teachers reported that collaboration taught them more about each other, the curriculum and interventions and the students. In a PLC, all are encouraged to participate in creating the vision and to keep it foremost in their minds while planning with colleagues, learning best practices together and from each other and delivering instruction in the classroom (Buffum et al, 2009; DuFour et al., 2006; Hord & Sommers, 2008). Teachers felt

more knowledgeable when they had input into creating the RTI documentation, planning the RTI meetings and making educational decisions for students based on the other team members' input and suggestions.

Rather than providing episodic workshops on RTI, professional development was “school based” and “integrated into the daily work of teachers” as Hawley and Valli (1998) and Joyce and Showers (2002) recommend (cited in Wayne et al., 2008). Informational sessions were provided when teachers and the leadership team deemed them necessary. Much of the learning took place during the team's PLC meetings, which also aided teacher learning because they benefited from the collective knowledge, expertise and experience in the group (Haager & Mahdavi, 2007; Raudenbush et al, 1992; Thibodeau, 2008). Furthermore, when Aloha Middle School provided school-wide professional development on other curriculum initiatives, the teams, which were already formed as a PLC, participated in the professional development together as a small group. These professional development sessions included instruction on cognitive mapping (*Thinking Maps*, Hyerle & Yeager, 2007), writing strategies (*Step Up to Writing*, Auman, 2003) and multiple sessions on Advancement Via Individual Determination (AVID) strategies (Cornell notes, critical reading strategies, AVID binder organization, AVID's levels of questioning, etc.). These small group professional development sessions allowed teachers to discuss how the strategies could be used team-wide and when RTI was introduced, the teams already had common base knowledge on instructional strategies.

At the commencement of this study, teachers did not feel they needed professional development, however, once they began the process in their PLCs and with the coordinator support in place, teachers felt comfortable asking for professional development in certain

areas where they exhibited weaknesses or uncertainty. Had they not been actively implementing the RTI process, they would not have known they needed professional development in areas such as data collection, interventions and modifications and assessment. This supports Schon's theory (1983) of job-embedded professional development allowing teachers to be "reflective practitioners." Because job-embedded professional development is conducted at the local level, teachers collectively have the opportunity to take charge of their own professional development by identifying needs and weaknesses. This autonomy led to higher motivation, and increased the amount of strategies learned to be implemented in the classroom (Dufour et al, 2006; Thibodeau, 2008). This is promising since several weaknesses in knowledge were realized as a result of the study.

From the interviews and group discussions, teachers showed confusion when defining instructional strategies. Some of the interventions listed were actually accommodations or modifications. Teachers used these terms interchangeably, but the educational practices the teachers define are very different and need to occur at different tiers within the RTI model. The Missouri Department of Elementary and Secondary Education (2011) defined the three terms to help clarify their differences. Accommodations are defined as changes made to instruction and/or assessments intended to help students fully access the general education curriculum without changing instructional content. Modifications, on the other hand, are alterations made to instruction and/or assessments that change, lower or reduce learning or assessment expectations. Modifications change or reduce the learning expectations of the goal. Finally, interventions are strategies or techniques used to teach a new skill, build fluency in a skill, or encourage the application of existing skills to a new situation. Interventions involve explicit teaching or re-teaching. What was evident from this study's

results, however, was that teachers had a large repertoire of strategies needed in order to differentiate instruction at Tier 1. A few of the students exhibited success at Tier 1 suggesting that accommodations and modifications are just as important as interventions and as such, they should not be overlooked when making curriculum decisions for struggling readers. Furthermore, teachers in this study knew to use AVID strategies as an intervention for building critical thinking and comprehension. RTI requires “research based instruction,” but it is clear that a pre-packaged curriculum program was not needed. The instructional strategies Aloha Middle School implements, such as AVID, Thinking Maps, Step Up to Writing, etc. are research-based (Auman, 2003; Boyle, 1996; Chan, 1991; DiCecco & Gleason, 2002; Gajria & Salvia, 1992; Hyerle & Yeager, 2007)). Teachers were knowledgeable about differentiation strategies and intervention strategies even if they misunderstood the different categories under which the strategies fell.

Because a majority of the differentiation and intervention strategies derived from the AVID program, this knowledge could be the result of the professional development associated with AVID site schools. AVID’s professional development is an ongoing process that begins with a week-long summer institute and continues throughout the year via ongoing support from trained regional and district directors and from the school’s AVID site coordinator which is usually a teacher or other faculty member (Watt, Huerta & Mills, 2009). The AVID summer institute provides AVID teachers with instructional strategies and a specific curriculum to use in the AVID classroom. Some of these strategies taught at the summer institute, such as Cornell note-taking, the use of writing, inquiry, collaboration, and reading strategies (WICR) and critical reading strategies (Watt et al, 2009) are some of the very same interventions the teachers in this study employed.

While teachers were knowledgeable about instructional strategies, two did request additional professional development in matching up appropriate interventions to specific weaknesses. They felt this was an area that could be further improved. This directly relates to the need for reliable assessments and curriculum-based measurements (CBMs). Decisions for RTI are best made when based on data (Batsche, 2011b). It is important to have a universal screening in order to identify those students who may experience struggles with content early on in the school year (Bender & Shores, 2007; Fuchs & Fuchs, 2007b), but as this study shows, the assessment must be deemed valid. Teachers were skeptical to center their decisions on the STAR test (the assessment designed for the Accelerated Reader program). While this assessment provided a grade equivalency, teachers were not able to determine exact weaknesses in students' skills, but merely that a problem existed. The Gates MacGinitie Reading Test offered more information by assessing vocabulary and comprehension, but this information was rarely shared because teachers were not proficient in analyzing quantitative data to drive instruction. Furthermore, these are survey tests that are limited in diagnosing individual students' needs. Ben mentioned that the English teachers were given instruction on running records and miscue analyses, but could not administer the assessments while trying to oversee a classroom at the same time. Data received from these assessments may have offered teachers more specific information regarding students' deficient skills.

Furthermore, teachers need professional development on what qualifies as CBMs and data. Teachers turned down a commercial CBM database in lieu of using their own measures. The math and English teachers used CBMs created by the school (Improvement Checks) which fulfilled the three needs of the assessment (Fuchs & Fuchs, 2007b), but data

was mainly derived from teacher driven assignments and as a result, was often difficult to maintain consistency in data collection.

Teachers also emphasized the need for an RTI coordinator to support teachers while they learn the RTI process and the data collection, data management and instructional decisions that ensue (Batsche, 2011a). This coordinator is a facilitator and can be compared to a coach. Coaching has been seen as an effective way of providing job-embedded, individualized professional development. Ideally, the coach is there to help with the revision process (Mednick, 2004, p. 3) and in this study, the coach or RTI coordinator gathered and organized Tier 1 and 2 data; supported teachers for small group and individual data collection; provided coaching for data interpretation and facilitated regular data meetings for teams (Batsche, 2011a); offered curriculum suggestions; and provide specific professional development when needed.

Teachers did exhibit knowledge about cognitive reading development as purported by Spear-Swerling and Sternberg (1996). Teachers recognized that these students' low reading abilities stemmed from skill deficiency rather than from biological deficits. In examining each student's level, teachers recognized that the phases of reading acquisition are dependent on cognitive processing and if they do not have background knowledge, more experience with texts or more reference points related to work knowledge, comprehension would suffer. We specifically saw this when teachers discussed Matthew and Mike. They also recognized that reading development is related to age and experience, so they did not choose interventions that focused on lower phases, but instead chose interventions that addressed automatic word recognition, strategic reading and proficient adult reading. We saw this through the specific vocabulary instruction, the use of leveled texts, collaborative learning

and the AVID strategies for critical thinking. This is significant since it attests to teachers' knowledge of cognitive reading development and literary interventions (Spear-Swerling & Sternberg, 1996).

Finally, from participating in the study, a majority of the teachers came away with the knowledge that general education and special education programs should not work in isolation (Bender & Shores, 2007; Buffum, Mattos & Weber, 2009). It has been recommended that regular education teachers be better prepared and willing to integrate and coordinate services for students who experience difficulty rather than relying on special educators (Kauffman, Gerber, & Semmel, 1998). As seen in Discussion of Results chapter, general education teachers took the instructional leads, choosing and administering the accommodations, modifications and interventions. Though this practical experience, teachers learned that RTI is designed to prevent long-term academic and social failure, rather than to prevent or validate special education placement (Fuchs and Fuchs, 2006).

**Practice.** To see response to interventions, teachers need to use a combination of assessments: universal screenings, pre and post-tests, and progress monitoring (Speece, 2005). Universal screening is one component of RTI that can inform the development of effective literary interventions. Although universal screenings may be overwhelming to implement at the middle level, the early identification of struggling readers is crucial in driving curriculum decisions (Johnson, Pool & Carter, 2011). It was seen that teachers struggled in providing appropriate universal screening when trying to determine students' abilities. Teachers reported administering different screenings, but teacher observations took precedence since teachers either did not trust the validity of the assessment or did not know how to analyze the quantitative assessment data in order to share student weaknesses with

colleagues. Along with universal screening, it is suggested that benchmark testing occur as well (Johnson, et al., 2011) which Aloha Middle School was already doing and was built into the RTI protocol documentation. By Tier 2, specific assessments should be used to diagnose specific weaknesses. It is very likely that students who experience reading difficulties at the middle level will experience difficulties in many areas, thus multiple assessments may need to be administered (Johnson, et al, 2001; Speece, 2005). Teachers were unsure what assessments were available and had asked the RTI cadre to compile a list of assessments that were available at the school and what each assessment measured. Furthermore, at Tier 2, curriculum-based measurement should be occurring (Fuchs, 1998, Fuchs & Fuchs, 2007b; Pennington, 2008; Speece, 2005). Teachers were administering, but not using CBMs as data, even though they had them available in the form of the department created Improvement Checks (ICs).

Teacher observations, student/teacher discussions and student work samples were likewise valuable qualitative data and contributed to this research which aligns with Fuchs and Fuchs (2007) and Speece's (2005) recommendation that universal screenings be used in combination with CBMs and patterns of growth. Data collection should be comprehensive and focus on varying types of data in order to see responses.

Collaboration is paramount when working with RTI. In studies, a student support team (SST) tends to consist of teachers, counselors, coaches, psychologists, and support staff, who collaborate on what interventions to implement, who will be implementing them and also in assessing the results of the intervention (Buffum, et al, 2009; Fuchs & Fuchs, 2007a). The results of the study showed that teachers feel more supported if parents and students (at the secondary level) were also members of the Student Support Team (SST). Parents need to

participate in the process in order to offer outside school support. Furthermore, collaboration with the student proved vital. The decision making process was made transparent to students and as a result, teacher/student relationships improved.

Students put forth more effort when they realized teachers were invested in their success. When teachers started mentoring students, performance was positively impacted and students shared information about themselves that helped teachers make educational decisions. Studies have shown, especially regarding at-risk students, teacher-student mentoring programs significantly increase grade point averages in English Language Arts classes, decreases in discipline referrals and decreased absenteeism (Calton, 2010; Dixon, 2011). The teacher/student relationship opened lines of communication and gave teachers information that could not be found in the students' cumulative folders or from any assessment. Because students' academic achievement is influenced by many variables, learning about students' family lives, medical issues, past experiences and confidence is revealing insight on the student.

The RTI process impelled teachers to apply targeted accommodations, modifications and interventions based on student weaknesses. To address student difficulties with word automaticity, teachers had students do oral reading and increased reading practice with books within the students' zone of proximal development (Allington & Cunningham, 2006; Moats, 2001; Williams, 2001). Vygotsky (1978) defines zone of proximal development as the difference between what a child can do with help and what he or she can do without guidance. Because word automaticity stems from vocabulary skills, interventions that built specific word knowledge and encouraged word associations (Moats, 2001) proved successful in the forms of a Frayer Model. The Frayer Model is a technique that defines target

vocabulary words and has students apply this information by generating examples and non-examples of the word. Through this strategy, students can increase their word automaticity, thereby increasing their zone of proximal development.

The majority of the interventions that focused on building reading comprehension were taught through AVID strategies. Many of these align with Biancarosa and Snow's (2004) recommendations of explicitly teaching comprehension strategies, monitoring and metacognition instruction, teacher modeling, scaffolded instruction and apprenticeship models. The critical reading worksheets require multiple readings that focus on different tasks in order to build reading comprehension. Cornell notes require students to annotate the text and actively question and make predictions, thus addressing metacognition. Students were scaffolding with guided questions that moved from levels of recall and ultimately, interpretations (Fischer, 2003). The progression helps students focus their reading and build knowledge of the text enabling them to move to a deeper understanding of the text.

Allington and Cunningham (2006), Biancarosa and Snow (2004) and Daniels (2002) recommend collaborative learning as a way to build literacy. When creating action plans for the struggling students, teachers found this to be a beneficial accommodation. The students were seen not only growing academically, but socially and emotionally as a result of collaborative learning and the strengthening of their own academic skills. The theory of social development supports collaborative learning as a means to surpassing one's ability levels as an individual (Meloth & Deering, 1994).

Conducting RTI at the middle level presents unique challenges. Tier 1 interventions are done in the regular education classroom and are provided by the regular education teacher; however, as students proceed to higher tiers, the level of support intensifies.

Teachers must provide 30-60 additional minutes of support and in smaller group settings with Tier 3 support; all while having a teacher/student ratio of 1:3 (Vaughn, et al., 2007). Achieving this ratio at the middle level is problematic. Middle level teachers can have over 100 students; Aloha Middle School teachers have between 135-145 students. Teachers have noted that finding time to administer interventions is difficult, as well as finding time to analyze the data. Scheduling restrictions prevented teachers from meeting with small groups after the lessons. Many of the teachers circumvented this challenge by utilizing collaborative learning and small group activities within the class (Ehren, 2008). The teachers also recommended that the school create an intensive remedial reading course that could serve as an intervention for Tier 3 (Johnson & Smith, 2011) and this was done for the following school year. The school purchased the Read 180 program for literacy and also the program for math, which would be piloted the 2010-2011 school year. The ALEKS program is a computer program that determines students' strengths and weaknesses in math and provides an individualized instructional plan for students to complete online. Mastery of each weak skill then moves students to the next level. This program is marketed to be an RTI based instruction. Curriculum programs were purchased (in lieu of teacher created curriculum) to address the manageability issue of CBMs and data management.

The school's schedule also prevented the PLCs from meeting as often as teachers would like. Having more time to meet about RTI was requested and in response, the administration adjusted the following year's bell schedule to provide more non-teaching periods for PLC collaboration.

**Confidence.** When continuous, job-embedded, and collaborative professional development occurs, it has been shown to have a positive impact on teachers' efficacy,

confidence and practice (Newman, 1999; Raudenbush et al, 1992; Timperley & Phillips, 2002). At the beginning of the study, seven of the ten teachers reported feeling confident in their ability to affect student performance even though many of them had little knowledge of RTI. Because these teachers showed high levels of self-efficacy, they were confident in their own ability to learn and eight of them were eager to learn about the process. This supports the theory of efficacy influencing choice of activity, effort exerted, perseverance in difficult situations and feelings about performance (Newman, 1999; Raudenbush et al., 1992, Timperley & Phillips, 2003; Wheatley, 2001). This counters Haager and Mahdavi's (2007) and Hansen's (2005) theory that lack of knowledge leads to lower efficacy. Teachers in this study felt confident in their ability to learn new initiatives and therefore exuded higher confidence in themselves.

By the completion of the study, all teacher participants stated they were confident in their abilities to provide sound interventions for students and data supports that this stemmed from the professional development and the PLCs. From the group discussions, teachers who stated they were unfamiliar with the RTI process spoke very little and some did not speak at all. In Scott, Charlene and Wanda's situation, as they experienced the RTI process, they were able to contribute more to the group discussions, thus demonstrating that the PLC built collegiality and provided teachers with the comfort to take instructional risks (Mednick, 2004). PLCs cannot function unless people participate and conversation is crucial. The evolution of the teams functioning as PLCs is seen in the increase of speaking and how directives in the form of questions changed to assertions.

Teachers also reported more confidence in their colleagues, which is attributed to participating in their PLC because teachers held collaboration in high regard. One teacher in

particular stated that what success they had seen would not have been possible if she had not had such devoted team members, which exemplifies collective efficacy. According to Goddard, Goddard and Tschannen-Moran (2007) schools that have a strong collective efficacy believe in their ability to achieve meaningful student learning regardless of obstacles that the faculty encounters. Collective efficacy is deepened by the use of professional discourse as a tool for teachers to realize the potential of their teaching and its' effect on student learning. We see the increase in professional discourse through the increase of assertions in the group discussions by a few teachers. Scott, Wanda and Charlene did not contribute at all during the informational session and even during the first team meeting, said nothing. This can be attributed to their self-proclaimed lack of knowledge. By the May team meetings; however, they spoke often. This transformation reveals their comfort in engaging in professional discourse.

Collective efficacy was also seen in the transformation of Kelly and Patty's group discussion statements. In the informational session, Kelly and Patty's gave negative assertion and they publicly doubted RTI, but by the last group discussion, both teachers were recommending RTI to other teachers. Kelly was promoting RTI to another English teacher, whereas Patty felt that teams should get together at the start of the year to implement RTI immediately.

From a socio-cultural perspective, the interviews revealed how the teachers' positions at the school affected their confidence levels in the RTI process which can be correlated to the political structures within a school (Grbich, 2007). While teachers were asked to volunteer for this study, they felt the RTI pilot program was imposed on them by

administration. Many saw the value in RTI, but felt powerless over the decision to implement it. The power was held by administration which affected confidence levels.

This was further supported by data from the informational session. The Vice Principal was the only person making declarations, in addition to assertions and directives. Teachers were confident they could learn and confident in their pedagogy, but because the power lay in other hands, the loss of control led to lower confidence levels in administration (the perceived chief decision makers). Searle (1976) posits a theory that differences in status or position of the speaker and the hearer affect the illocutionary force behind an utterance, which was seen in the beginning of the study. The Vice Principal has a higher position in the school, and thus, can give directives and declarations, whereas teachers, who are situated in a lower position, can only offer suggestions or requests. The teachers' status was reflected in the number of assertions made in relation to the Vice Principal's directives and declarations. This coincides with Foucauldian discourse analysis which identifies statement and tracks their changes in the creation of power-laden discourses (Grbich, 2007). There was a definite control over knowledge and in creating this specific discourse, and by using specific speech acts, the Vice Principal's interests obscured others' voices.

Teachers reported having more confidence in the administration when they were granted a voice in the creation of the school's RTI process. Sweetland and Hoy (2000) found that teacher empowerment to make important decisions about teaching and learning, resulted in school effectiveness, which was defined through achievement in math and reading measures. When teachers voiced concerns about the pilot program, administration and the RTI cadre addressed the concerns readily. School-wide documents, protocols and infrastructure were directly impacted as a result of teacher input and feedback. More

significant than the procedural changes, is the necessary culture shift in the school's day-to-day operations (Spillane, Reriser, & Reimer, 2002 cited in Johnson & Smith, 2011).

Furthermore, teachers' sense of empowerment was also driven by the school's newfound autonomy from their previous curriculum provider. With curriculum decisions being made at the school level, teachers were given more of a voice.

### **Research Question Two**

The second research question asks if RTI impacted student reading achievement as evidenced by indicators of student progress. RTI has led to improved outcomes for students by providing multifaceted supports for students who struggle with the demands of a middle level curriculum. RTI can be especially effective at the middle level because the RTI framework is consistent with many of the characteristics of successful schools (Johnson & Smith, 2011). This study proved that students benefitted both academically, social and emotionally as a result of RTI.

In general, teachers determined which students would pilot RTI based on the dual discrepancy model (Speece, 2005) in which students were below classmates both in reading level and in slope of improvement. Two of the students were at an appropriate reading level, but were chosen due to lack of improvement in motivation and classroom performance. Through collaboration, teachers targeted specific weaknesses in students, determined what interventions could help, implemented the interventions, collected data on students' responses to these interventions and then analyzed the data to determine if the interventions were successful. While reading assessment scores indicated the interventions to be successful, teachers' observation and data took precedence and these showed mixed results.

Certain factors such as student initiative, parent involvement and resources outside the classroom also contributed to the results.

Students who were chosen to participate had between a 3.5 -8.4 reading grade equivalency on the STAR test and a 4.5-8.9 reading grade equivalency on the GMRT. Based on these levels, students exhibited difficulties and strengths that closely coincided with Spear-Swerling and Sternberg's phases of reading acquisition (1996).

One of the students was noted to be at the controlled word recognition stage. While he was explicitly taught comprehension strategies, the student's English teacher needed to work on phonological and orthographic reading instruction through the re-teaching and the practice of morphemes and continued word study (Moats, 2001).

Four of the students displayed weaknesses and abilities that were indicative of the automatic word phase. Students could recognize the words, but struggled with comprehension. Most students who do word by word reading do not yet read words with enough fluency to facilitate comprehension (Biancarosa & Snow, 2004; Denton et al., 2003) and interventions for them needed to focus on comprehension strategies using whole language rather than phonological and orthographic reading instruction (Spear-Swerling & Sternberg, 1996). Many of these interventions included Thinking Maps to break down the text (Boyle, 1996; DiCecco & Gleason, 2002), AVID WICR activities, leveled texts (Allington & Cunningham, 2006; Williams, 2001), and guided questions (Fischer, 2003).

Three of the students were at the strategic reading level, which tends to begin at third and fourth grade when students routinely use comprehension strategies while reading. This was seen in those students who had fluctuating reading performances. The interventions for this phase include additional comprehension and "fix-up" strategies (Biancarosa & Snow,

2004). Many of these interventions align with AVIDs metacognition and critical thinking strategies, such as think, pair, share, critical reading worksheets and Cornell notes.

Two eighth grade students were at a proficient adult reading level. They are not considered struggling readers because they are performing at level and the continued instruction they would receive in general education Language Arts class should be sufficient; however, their identification seemed to stem from motivational and organizational concerns. Choosing these last two students to participate in RTI may have contributed to the 8<sup>th</sup> grade's team experiencing a lesser impact than the 7<sup>th</sup> grade team.

While the 8<sup>th</sup> grade reading assessment scores increased more than the 7<sup>th</sup> grade scores, RTI had a greater impact on the 7<sup>th</sup> grade students academically, socially and emotionally. Two suppositions for this result are the timeliness of the intervention process and the concept of looping, which is the practice of advancing a teacher from one grade level to the next along with his or her class. At the end of a "loop" of two or more years, the teacher begins the cycle again with a new group of students. This long term investment in students is conducive to RTI since schools need to recognize that RTI is a multiyear commitment, but this also must be a multiyear commitment at the class level as well (Johnson & Smith, 2011). According to the National Middle School Association, essential relationships created during the first year of looping establish a sense of community that enables teachers, students, and their families to engage fully in the overall learning process, which significantly impacts learning and engagement (Thompson et al., 2009).

Interventions must be timely and administered as early as possible to yield positive results (Fuchs & Fuchs, 2007a; Lyon, 1998; Vaughn & Klingner, 2007). The 7<sup>th</sup> grade team had an advantage because they were identifying students for RTI who had just come into the

middle school. The 8<sup>th</sup> grade team worked with students who had one additional year of skill deficiency. Studies have shown that as students advance to high school, the overall effect size for reading comprehension measures decrease (Scammacca et al., 2007). Furthermore, the longer a student struggles with reading, the greater the chance of frustration and lack of motivation (Allington & Cunningham, 2001; Tankersley, 2005). This was seen with the 8<sup>th</sup> graders' efforts in math class. Because they had already failed a semester, little effort was put forth by some of the students since they already had to attend summer school.

Looping may have also played a role in the 7<sup>th</sup> graders' performance. While both teams were working with new students, the 7<sup>th</sup> grade team would stay intact as they looped to 8<sup>th</sup> grade. George and Lounsbury (2000) and George and Shewey (1997) found that participants of looping were more invested in the teacher-student relationship, which led to better rapport and higher levels of student achievement (cited in Thompson, Franz & Miller, 2009). Higher levels of effort from both the 7<sup>th</sup> grade teachers and 7<sup>th</sup> grade students were observed in this study. Several 7<sup>th</sup> grade teachers commented how beneficial RTI has been because they already have knowledge of students' strengths and weaknesses and what strategies proved effective, which would allow them to begin instruction immediately the following year (Thompson, et al., 2009).

As mentioned previously, many of the interventions were based on the AVID essential guidelines. When AVID strategies have been implemented, they have resulted in increased time spent on homework and assignments, increased language arts grades, increased performance in writing and greater self-efficacy in reading/ English Language Arts (Black, Little, McCoach, Purchell & Siegle, 2008). The results of the 7<sup>th</sup> grade students

specifically mirrored these results and even though two of the students still struggled with writing, improvement was noted.

In addition to the need for students to achieve academically, classroom teachers were cognizant of their students' developmental differences and needs (Lipsitz, 1984; Caskey & Anfara, 2007) and implemented interventions that focused on social and emotional weaknesses as well. Teachers recognized that poor academic skills led to lower self-esteem and steps were taken to rectify this. While the study initially focused on literacy skills, supporting students' self-esteem and confidence are important educational goals in and of themselves. But they are also important to academic success because students with high self-esteem will have the confidence to take on new challenges in literacy learning and other academic areas (Au, 1993).

Even though teachers tried to pick students for RTI based on purely academic needs, RTI is often associated with a positive behavioral support plan (PBS) (Bender & Shores, 2007; Sugai & Horner, 1999 cited in Johnson & Smith, 2001). Both learning and behavioral problems often contribute to students' academic difficulties, and this is particularly the case by the time students enter middle school (Johnson & Smith, 2011) and conversely, this ties to motivation. From the results, once the seventh grade students began improving academically, classroom behavior and effort improved. The eighth grade students did not exhibit poor classroom behavior, but effort was severely lacking. Eighth grade students made minimal gains in effort once they began to improve academically.

While reading assessment scores indicated the interventions to be successful, teachers' observation and data took precedence and these showed mixed results with 7<sup>th</sup>

grade students exhibiting a greater response to the intervention than 8<sup>th</sup> grade students. This supports the theory of early interventions yielding greater results (Scammacca et al., 2007).

The success that was seen in implementing RTI through PLCs can be explained by what I am calling The Three Rs of PLC Participation: Reflection, Relationship and Results. When these three are present in PLCs, they support the implementation of RTI and contribute not only to student growth, but teacher growth and empowerment as well.

RTI is cyclical in nature; it involves determining a specific weakness, administering targeted interventions, and then reflecting on one's teaching and students' responses as evidenced by data. If improvement is seen, teachers should continue with the intervention to ensure student success. Teachers must also be "reflective practitioners" (Schon, 1983) and admit when interventions are not being successful with particular students. At this point, teachers need to reevaluate the weakness and try another intervention. The eighth grade team did this when they realized the advisory tutoring was not yielding positive results for Kiana and Tamara. There was no blame, or excuses, but rather a new intervention was put in place. Cochran-Smith and Lytle (1999) maintain that teacher learning hinges on enhancing teachers' understandings of their own actions, their assumptions, their reasoning and their own inventions of new knowledge to fit unique and shifting classroom situations. This view of teacher learning is based on the idea that knowledge comes from reflection and inquiry in and on practice.

Teachers also reflected on details of the RTI process, such as using appropriate assessments, managing data collection, and using data to improve instructional practices. Ben reflected on the use of assessments. While many assessments were administered, their team rarely disseminated the data to each other (which was a similar case with the 8<sup>th</sup> grade

team). Barbara also recognized that more professional development was needed on data collection and in order to reflect back on the RTI process, better CBMs were needed. She mentioned that teachers need to understand that data collection can come in many forms, not just test scores. Cochran-Smith and Lytle (1999) found teachers and other participants in inquiry communities invent new forms and frameworks of analysis and interpretation. Some of these forms and frameworks may look quite unfamiliar to those who are accustomed to traditional modes of data collection and analysis. Regardless of what form the data is in, reflections and instructional decisions must be based on results.

During the final interview, Wailani reflected on the overall RTI process and admitted that she needed to leave herself reminders to implement the interventions. She commented for the following year, it would be behoove them to have a “better set of organization. Like have a little folder for each kid or something” in each teachers’ class, so teachers could easily jot down notes before inputting data into the computer (personal interview, May 25, 2010). These folders could then be shared with other teachers. Going through this reflective process with colleagues not only helped teachers to revise their practice and learn to be more confident in their own teaching, but more importantly, it helped them develop stronger relationships with one another.

Teachers saw value in collaboration. Charlene and Scott both mentioned that hearing what other teachers were doing in their classes, helped prompt them to use new strategies. Through this collaboration, trust was built. Samantha noted that her team supported her and through this support, she trusted them. Had she implemented RTI with her previous team, she doubted that RTI could have been successful. The collaboration and trust in one another led to collective efficacy (Hoy, 2010; Goodard, Hoy, & Woolfolk, 2000). When teachers

trusted each other, they were willing to take additional curriculum risks and try to instructional practices. These relationships that were formed were critical in the success of the team-based PLCs and also in implementing RTI.

This collegiality also helped bridge the gap between general education teachers and special education teachers, since all teachers were involved in assisting struggling students, regardless of labels. Barbara and David both mentioned that the general education teachers assumed the responsibility of prescribing interventions and modifications. In the past, this was a duty general education teachers would have allocated for the special education teachers to complete. In the informational session, Kelly asked, “You are asking us to make IEPs [Individualized Educational Plans] for the 17% of our kids?” (video-taped transcript, January 21, 2010). Through this question, she essentially pointed out that the task was massive, but she further insinuated that administration was asking general education teachers to stretch beyond their domain. Kelly’s pointed question caused other teachers to nod and echo her point. However, at the end of the pilot program, Wanda mentioned that if the school implemented RTI school-wide it would not be too great of a task and likened it to having “five more IEPs” (personal interview, May 27, 2010). This was a stark contrast to how teachers felt at the beginning of the pilot program and it showed how she assumed a role similar to a special education teacher and accepted it. Haager and Mahdavi (2007) contend the delineation of roles for general and special education teachers becomes less clear while implementing RTI, and as students with and without disability levels require interventions.

This inclusive process also aided in building stronger relationships with students. General education teachers actively worked with struggling students and through this intensive effort, teachers uncovered students’ interests, strengths, and challenges. Teachers

found music to be a motivating stimulus for Andrew and initially, getting Andrew motivated was extremely difficult for teachers. When Kelly found out Michael could not hear, that answered many questions teachers had about Michael. A solution as simple as an accommodation to a disability, kept him from being successful in school and until a caring teacher asked him to write a letter, this impediment was overlooked. Forming these relationships with students is difficult when classes and rosters change every year, yet developing these bonds is even more crucial at the middle level when students need positive adult advocates in their lives. Looping is a way of increasing teacher student relationships and this was evident in the results of the 7<sup>th</sup> grade team. Both teachers and students were more invested because they were looping the following year and could apply what they had learned in the future. This supports George and Lounsbury (2000) and George and Shewey (1997) studies which found that participants of looping were more invested in the teacher-student relationship, which led to better rapport and higher levels of student achievement (cited in Thompson, Franz & Miller, 2009).

These relationships cultivated student confidence, which in turn, contributed to student results. Prior to middle school, Kayla's anxiety caused physical manifestations. One of the initial concerns the team had about her was her anxiety and confidence. As a result of the teachers working with her and building those relationships, they witnessed her self-confidence strengthen. Charlene even noted leadership potential when Kayla maintained and supported her answer instead of conceding with her peers. This was also seen in the 8<sup>th</sup> grade students. Michael's confidence and performance improved. His writing became a quality he was proud of and the encouragement of his teachers spurred this.

Through these relationships, teachers met the social and emotional needs of the students, which directly impacted student achievement. The assessment scores are evidence of this, but students' willingness to revise their work, their improvement in their writing skills, their participating in class, evidence of critical thinking and intrinsic motivation are the true indicators of how RTI and teacher practice can affect student performance.

Student performance has a direct correlation to teacher empowerment. When teachers witness student success, they feel more efficacious (Raudenbush, Rowan & Cheong, 2009) and this was seen in the study. Wanda's comment regarding Kayla dropping out of AVID shows that Wanda felt she had contributed to Kayla's success, which validated her instruction. This, coupled with Wanda speaking and contributing more in PLCs, shows empowerment. In fact, PLCs are political in nature because the goal is to transform the relationships of the stakeholders involved in the educational process and this collective learning alters traditional relations of power, voice and participation (Cochran-Smith & Lytle, 1999).

Teacher empowerment was also seen when teachers felt they had input into the RTI process. Bomotti, Ginsberg, and Cobb (1999) define empowerment as "teacher participation in all decision making directed towards carrying out the school's instructional mission, both in the classroom and throughout the school" (p.5-6). Ben stated he was pleased when the administration "allowed" them to amend the RTI documentation (personal interview, February 16, 2010). His choice of words indicated that he acknowledged his lower status; however by the end of the pilot program, administration was asking Ben for feedback on the process so the school could make changes to the process before going school-wide. He thought that getting teacher input into the process "was key" (personal interview, May 29,

2010). This supports Wayne's (2001) suggestion that moving toward a model of shared decision making and community-building often strengthens the role of the teachers. Cochran-Smith and Lytle (1999) state that bringing out educational change helps enlarge the teacher's role as decision maker, consultant, curriculum developer, analyst, activist and school leader. As a result, teacher empowerment has major implications. Imig, Ndoye and Parker's (n.d.) study found that high levels of teacher empowerment and perceptions of school leadership relate to high academic performance.

Participating in PLCs encourages reflection, relationships and results and these practices not only contribute to RTI's success, but the transformation of teachers, the students and also the school.

### **Practical Implications and Recommendations**

Theoretical implications of this study were presented; however, in order to see these theories become realities in our schools, they must be translated into practice. Practical implications and recommendations will be presented for lawmakers, districts, school administration, and teachers.

**Policymakers.** There has been much debate over the identification of learning disabilities (LD) and the most appropriate ways to help struggling students achieve academic success. Response to Intervention (RTI) began as an alternate way to regard learning disabilities in two respects. First, it was looked at as a way of preventing students who struggle with reading from being labeled as having a disability, especially if these difficulties could be resolved with more intense or varied instruction. Secondly, it could be used in place of the IQ Achievement Discrepancy Model for identifying students as having LD and who would benefit from specialized services as required by federal law. The IQ Achievement

Discrepancy model has been deemed ineffective and harmful by many researchers, yet it was the consistent method of LD identification until RTI was endorsed (Fletcher & Denton, 2003; Public Law 108-446).

The IQ Achievement Discrepancy model has been fraught with concerns, some of which are: the assessment occurs at one point in time (Smith, et al., 2004); it is a norm-referenced assessment which has inherently low validity (Smith et al., 2004; Vellutino et al., 2006); the assessment tends to be administered once the student has experienced struggles and failure, thus students are identified too late and gaining the moniker the “wait to fail” approach (Bender & Shores, 2007); the assessment tends to provide false negatives or over-identification of students who could be LD (Vaughn & Fuchs, 2003); it does not distinguish between reading deficits caused by poor instruction versus reading deficits caused by biologically based deficits (Vellutino et al., 2006); and does not account for how the degree of discrepancy from IQ would relate to the severity of LD (Vaughn & Fuchs, 2003).

With President’s Commission on Excellence in Special Education (2002) and the Individuals with Disabilities Education Improvement Act (IDEIA) of 2004 supporting an alternate approach to LD identification, lawmakers should act on these recommendations and endorse RTI. RTI when incorporated with the Three Rs of PLC participation, focus on continual results, rather than one test score.

**School Districts.** First, school districts must have clear expectations of what RTI is in order for schools to implement it with fidelity. Also, by setting clear expectations, district personnel will be able to anticipate what types of support they will need to provide to schools.

Secondly, districts must support schools as they embark on the implementation of RTI. Support may come in many forms: monetary support for the purchase of assessments or instructional material; differentiation training or training in evidence-based practices for teachers; data collection management assistance; and resource/specialist support. It is also recommended that districts design an online medium for the RTI documentation process. Having a common RTI database would make relaying instructional decisions and student performance more accessible to teachers as students get promoted to the next grade and or school.

Third, district leaders must expect accountability. If the expectations have been set and the supports are in place, schools should be accountable for implementing RTI and having evidence of implementing it with fidelity.

**School Administration.** School administrators must commit to an RTI plan; however, a commitment does not necessarily mean the entire school must implement RTI. It is recommended that the school limit the focus of implementation by grade level or by content area. This would enable schools to pilot the program and foresee and address any challenges before implementing it school-wide. Schools must ensure that the Three Rs of PLC participation can be supported as well. While implementing this school-wide would be a challenge considering the large number of students, if this process was done in a timely manner, the number of struggling students should decrease as the year progresses. Getting teacher feedback for amending RTI before school-wide implementation is also encouraged so teachers can reflect and become empowered. Also, schools must commit to an implementation time of at least three years in order to see true results. It is important for the school staff to realize that what they are implementing now will have a residual effect in later

years. Unfortunately, at the culmination of this pilot program there was a change in school's budget, which resulted in a loss of resource positions, teachers and funding, and Aloha Middle School did not proceed in implementing the RTI plan school-wide. Continuity of instructional strategies and data collection did not occur past the 2009-2010 school year. This is not optimal in gauging or promoting student achievement.

The school should also create a school based leadership team (SBLT) (Batsche, 2011a) to guide implementation of the RTI process. At Aloha Middle School, the SBLT was called the RTI cadre, but it consisted of a teacher from each content area, an instructional coach, a behavioral specialist, Student Service Coordinator, guidance counselor and an administrator. This team does an assessment of the school and using educational research, designs an RTI plan for their school's needs. Decisions on professional development, curriculum, interventions, data collection and management are made.

From this study, the formation of an RTI coordinator position is beneficial, especially in the first few years of implementation. Batsche (2011a) states the expectations of an RTI coordinator include ensuring pre-meeting preparation; reviews steps in the process and desired outcomes; facilitates movement through steps; facilitates consensus building; sets follow-up schedule/communication; creates evaluation criteria; ensures parent involvement and finally, organizes professional development.

Schools, the SBLT and the RTI coordinator should set clear timelines as well. Because RTI is based on data, it is important to have timely and frequent data to determine if students are responding to the interventions. Screenings and progress monitoring results should be reviewed and analyzed monthly (Johnson & Smith, 2011).

It is also important to build consensus amongst the faculty and Batsche (2011b) purports that teachers will be open to change if they see a need for the change and if they believe that they either possess the skills necessary to implement the change or have the support for acquiring the skills necessary to implement the change. Based on this study, teachers were more receptive to the idea once they realized they were doing much of the Tier 1 work already; it was not something new to learn, just a new way of organizing and documenting plans for students. Also, teachers saw the need for RTI once they looked at data; data was proof that instructional practices were either effective or not. Finally, teachers became more confident in the support they received because they had input into the process and vocalized what professional development they needed to order to support students.

The nature of the professional development is important and directly tied to student achievement, teacher knowledge, practice and confidence (Soodak & Podell, 1996; Wheatley, 2001) and therefore, schools must provide effective professional development on the implementation of RTI, interventions, and data collection. There are varying studies that purport effective professional development models (Clarke & Hollingsworth, 2002; Elmore, 1996; Flores, 2003; Shower, et al., 1987), however, common key principles of professional development that lead to empirical and sustained teacher growth are:

- it is grounded in inquiry, reflection and experimentation that is participant-driven (Clarke & Hollingsworth, 2002; Darling-Hammond & McLaughlin, 1995);
- it is job embedded (Clarke & Hollingsworth, 2002)
- it is ongoing (Darling-Hammond & McLaughlin, 1995; DuFour, et al., 2006)

- it is supported by modeling, coaching and collective problem solving (Darling-Hammond & McLaughlin, 1995)
- it engages participants in research, theory and is data driven (Bullough, 2007)
- it is collaborative (Bullough, 2007, DuFour et al, 2006; Mednick, 2004; Olverson & Ritchey, 2007).

A powerful form of teacher learning comes from belonging to PLCs that extend beyond the classroom. Schools should support teacher team-based PLCs and provide adequate time for PLCs to meet in order to implement RTI and to build collegial relationships. Collaboration and team decision-making based on data has proven effective with regard to RTI (Buffum et al. 2009). Referring back to The Three Rs: teachers need time to reflect collaboratively and to build professional relationships with their colleagues.

Finally, schools should encourage the practice of looping. The Association of Middle Level Education posts that looping in middle school provides an opportunity to support meaningful relationships and learning (Research Summary, 2011). As evidenced from this study, those participants who were planning to loop (7<sup>th</sup> grade students and teachers) were more invested in the RTI process overall. Since the success of RTI occurred as a result of reflection, relationships and results, if teachers loop with their colleagues and students, it would offer more time to build relationships with each other, with students and also provide teachers the chance to see the long range effects of the interventions implemented.

**Teachers.** Since teachers are seen as the most influential factor in students' achievement, it is necessary that teachers themselves, be continually learning. With new research being published daily, new educational initiatives being designed and the constant need to keep curriculum and teaching methods updated, teachers must participate in

professional development in order to continually build their knowledge and keep their classroom practices innovative (Cocharn-Smith & Lytle, 1999). For RTI to be successful teachers must be implementing research-based instruction and so, teachers must hone their own skills frequently in order to best serve their students and continually need to reflect on their practices.

While data analysis can be intimidating for some teachers, it needs to occur so teachers can make curriculum decisions based on evidence. The practice of sticking to a curriculum map or pacing guide is not feasible if students are struggling because as the curriculum progresses, students who do not grasp the concepts remain further behind as evidenced in the Matthew Effect study (Stanovich, 1986). If student-based data shows success, curriculum can move forward, if not, teachers need to reflect on their practices and modify their curriculum plans. For those students who do respond to the interventions, advancement to next tier does not need to occur. Supports can remain in place if deemed necessary or teachers can gradually release the students from the intervention plans. RTI must be driven by results.

A shift in ideology must occur as well. Teachers can no longer view special education and regular education in isolation. They are two units that need to work together and form relationships for the sake of the students and for school success, and this can be done when implementing RTI in PLCs. The purpose of special education is to make education accessible to all students, regardless of disability; however, this should not exclude regular education students from receiving services and support that they may need. Likewise, regular education teachers must take ownership over the accommodation and

modifications of assignments. The dichotomy of “their students” and “our students” needs to cease and the realization that all teachers support all students needs to occur.

Finally, teachers must believe that all students can learn. The assumption that non-proficient readers are LD needs is no longer valid. Students have been successful in improving academic performance when they are supported through explicit teaching, research based interventions and caring teachers.

### **Implications for Future Research**

Since this study focused on the pilot program of an RTI process, further studies following a school-wide implementation of RTI would offer more research on the impact of RTI. Still greater, would be to study district RTI initiatives as different schools begin to implement RTI under the similar expectations.

AVID strategies proved to be successful with struggling students at this site; however, students were receiving multiple interventions so it cannot be assumed that AVID strategies are solely responsible for the academic growth. A future study could focus on AVID strategies as the intervention plan itself, isolating other instructional strategies as variables. This would help determine AVID’s effectiveness in school’s intervention plans.

One possible reason the 7<sup>th</sup> grade team experienced more success could be linked to looping. Looping has been attributed to creating stronger teacher-student relationships, which affects rapport, effort and achievement. Studying the impact of looping on RTI at the middle level would be help schools in their preparation and implementation of RTI.

### **Limitations**

As a formative design experiment, the researcher is not an outsider observing, but rather a partner in curriculum planning. While Reinking and Bradley (2008) state that

collaborating alleviates some of the concerns of issues of power, privilege and authenticity that have been noted as problematic when researchers work in the classrooms (Reinking & Bradley, 2008), yet the line between researcher and participant can be easily crossed. As the researcher and an instructional coach at the school, teachers instinctively looked to me to assist them on the RTI process. Because I was an available support staff member, I took over as the RTI coordinator. While I did not make any curriculum and intervention decisions, I was asked to offer suggestions and research some proven interventions. According to Reinking and Bradley (2008), this is acceptable in formative design experiments; however, other may question the validity and objectivity of the study.

Because interventions were studied in an authentic environment, there were naturally occurring variables that possibly affected the implementation of the intervention and instructional responses. Since RTI is an intervention process that occurs within the classroom, the study's plans needed to be amended periodically, thus leading to results that focused on the cognitive and social development of students as well as the academic aspects of RTI. Some educators may view this study as going outside the scope of the initial research questions as a result, but the study's design approach allowed for naturally occurring trends to develop.

This study focused on teachers' perceptions of RTI, but did not take into account students' perceptions of the process. The study may have been enhanced if students gave their input on whether RTI had a direct impact on them or not.

Finally, the impact of RTI could not fully be realized since the program was cut due to budget constraints at the end of the 2009-2010 school year. Six of the participating

teachers, four participants on the RTI cadre and one administrator were displaced, hindering the advancement of the initiative and limiting the collective knowledge on RTI.

### **Concluding Remarks**

Middle school represents a major change in adolescents' lives and includes changing schools, teachers, adjusting to more specialized content subjects, meeting the demands of more complex assignments requiring more independent and critical thinking skills and also, state mandated assessments such as the Hawaii State Assessments. This can be daunting for students' who are struggling and can result in increased academic, social and emotional challenges. For teachers addressing the needs of struggling middle school students can also be overwhelming because at this age, struggling students tend to be deficient in many skills and as a result, these students are incorrectly assumed to be LD. RTI has proven to be successful in determining if a child is LD, but most importantly, for providing necessary supports for struggling students.

As such the purpose of this study was to examine the impact of the implementation of a four tiered RTI model on student reading progress as evidenced by indicators of student progress. It also assessed whether participating in professional learning communities (PLCs) influenced the RTI process and ascertained which factors contributed to teacher change.

Working in a PLC to implement RTI impacted teachers' knowledge, practice and confidence. Teachers became more knowledgeable about RTI through professional development, collaboration and through experience. After working with RTI in PLCs, teachers reported that the collaboration helped improve their practice and their relationships with other teachers, students and parents. Teachers reported more self-efficacy and confidence in their team members.

Teachers recognized the challenges they faced when implementing RTI at the middle level. The time requirements, the amount of students, and the documentation proved to be overwhelming at times. In order to combat this, school administration must support teachers with clear expectations, protocol procedures, professional development, resource support and time for PLC meetings.

Implementing the RTI process also impacted student performance academically, socially and emotionally. Through collaboration, teacher targeted specific weaknesses in students, determined what interventions could help, implemented the interventions, collected data on students' responses to these interventions and then analyzed the data to determine if the interventions were successful. Reading assessment scores indicated the interventions to be successful; however, teacher observation and classroom data determined if the interventions were successful.

From the results, an emergent theory came to fruition, which was RTI can be successful at the middle level when employed through PLCs because The Three Rs are supported: reflection, relationships and results. When implementing RTI while functioning in a PLC, reflective practices are encouraged, collaboration is fostered and curriculum decisions are result-based. This collective effort on the part of the PLC to support student achievement also positively impacts teacher student relationships.

It is recommended that states endorse an RTI policy to support students and to set clear expectations on the levels of support teachers should provide to students. This organized approach is a comprehensive process for intervening with struggling students and also helps teachers systemize their instruction.

## Appendices

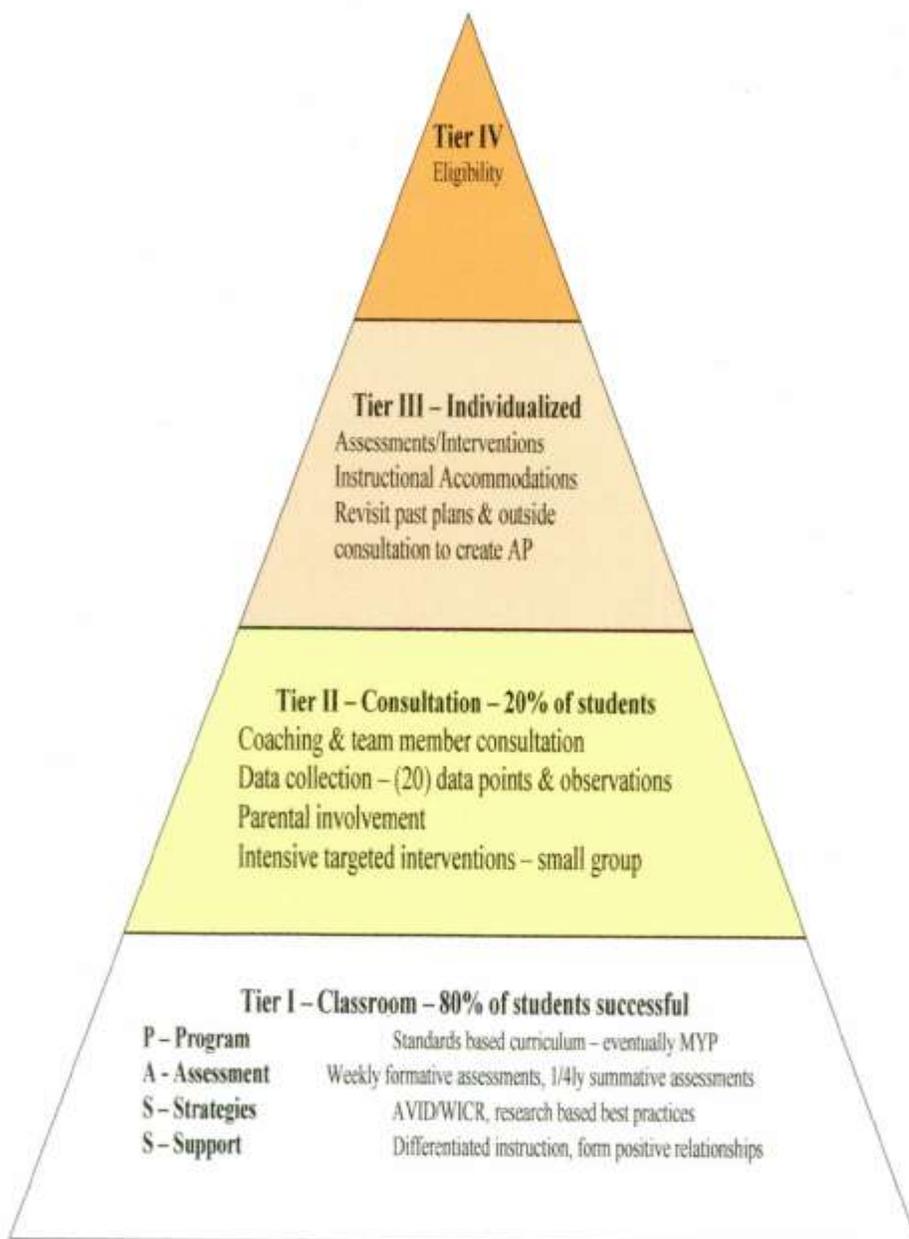
## Appendix A: Georgia Student Achievement Pyramid of Intervention



## **Appendix B: Initial Interview Questions**

1. How has your team identified your struggling readers?
2. What interventions have you implemented in your classroom to address these struggling students' needs?
3. Are there any team wide interventions? If so, what are they?
4. How are you assessing if the interventions are successful?
5. What do you know about Response to Intervention?
6. What aspects of the process do you find beneficial? Anything you are optimistic about implementing?
7. What aspects of the process are you concerned about?
8. How confident are you in providing Tier 1 and 2 interventions?

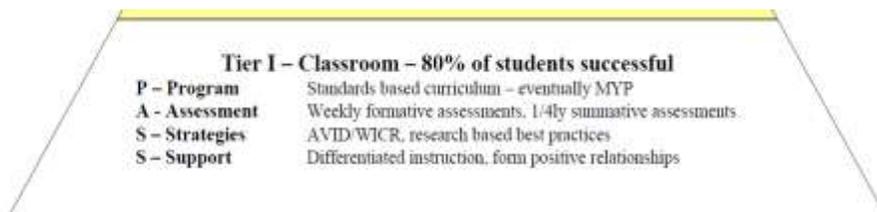
### Appendix C: Aloha Middle School's RTI Pyramid



## Appendix D: How Does RTI Work (Professional Development)

### How does RTI work?

## What is Tier I?

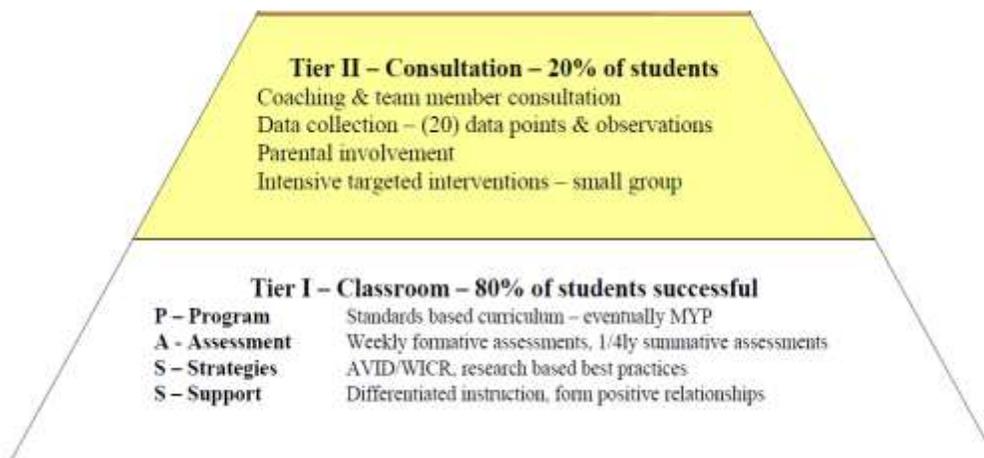


It's what you're already doing in your classroom.

For Example:

1. Standards based instruction
2. IC Checks, CRs
3. AVID/WICR Strategies
4. Differentiated Instruction (chunking, printing off notes for students, varied assessments, modified HW/class work assignments, varied grouping, varied expectations).

## What is Tier II?

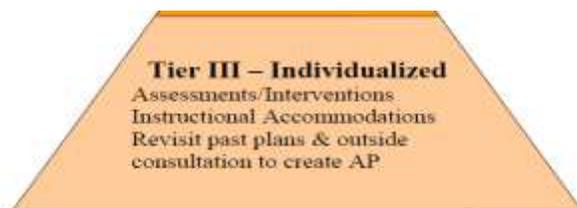


If **Tier I** interventions do not work, you'll need to move on to **TIER II** interventions which include:

1. Extra support - consultation from coaches, colleagues, counseling dept, and House VPs.
2. More parental involvement - parent meetings, increased communication

3. Data Collection - collecting what you are already doing (IC, quarterly, HW/class work) for progress monitoring.
4. Tutoring (either teacher: student or online tutorial program)

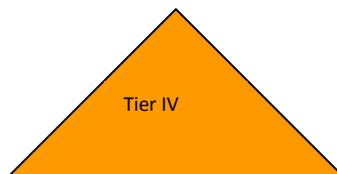
## What is Tier III?



If Tier II interventions do not work, you'll need to move on to TIER III interventions which include:

1. Extra support - consultation from coaches, colleagues, counseling dept, and House VPs.
2. More parental involvement - parent meetings, increased communication
3. Data Collection - collecting what you are already doing (IC, quarterly, HW/class work) for progress monitoring.
4. Tutoring
5. Create action plan for student
6. Curriculum changes such as intervention classes

## What is Tier IV?



If Tier III interventions do not work, you'll need to move on to Tier IV, which includes:

1. Eligibility testing for special education placement
2. If eligible, Individualized Education Plans are created and followed

## Appendix E: Aloha Middle School's RTI Support Plan/Documentation

### Tier I Analysis

Name of Student \_\_\_\_\_ Date \_\_\_\_\_

Team/ Homeroom \_\_\_\_\_

Participants Present \_\_\_\_\_

#### Short overview of concern:

Evidence to support concern:

#### Historical Data:

- Attendance \_\_\_\_\_
- HSA scores- Math \_\_\_\_\_ Reading \_\_\_\_\_
- GMRT scores \_\_\_\_\_
- STAR assessment \_\_\_\_\_
- Quarterly Scores- Math \_\_\_\_\_ Reading \_\_\_\_\_
- ICs - Math \_\_\_\_\_ Reading \_\_\_\_\_
- Achieve 3000 reading level \_\_\_\_\_
- Classroom assessments
  - Type \_\_\_\_\_ Result \_\_\_\_\_
  - Type \_\_\_\_\_ Result \_\_\_\_\_
  - Type \_\_\_\_\_ Result \_\_\_\_\_

#### How have student strengths been capitalized?

What has been happening in Tier I (differentiation done to meet student's need)?

Results of differentiated instruction:

#### Next Steps:

Additional Tier I approaches to use:

Who will collect data and progress monitoring? \_\_\_\_\_

How often? \_\_\_\_\_

What data points will be used (8 points)? \_\_\_\_\_

Next meeting \_\_\_\_\_

**Tier II Action Plan**

Name of Student \_\_\_\_\_ Date \_\_\_\_\_

Team/ Homeroom \_\_\_\_\_

Participants Present \_\_\_\_\_

**Results of Diagnostic Information:****What is the specific learning issue(s)?****How are we going to target this specific learning issue(s)?**

Math: \_\_\_\_\_

ELA: \_\_\_\_\_

SS: \_\_\_\_\_

Sci: \_\_\_\_\_

HR/Adv: \_\_\_\_\_

Coaching Support Needed for Professional Development:

**Next Steps:**

Who will collect data and progress monitoring? \_\_\_\_\_

How often? \_\_\_\_\_

What data points will be used (20 points)? \_\_\_\_\_

Next meeting \_\_\_\_\_

### Tier III Action Plan

Name of Student \_\_\_\_\_ Date \_\_\_\_\_

Team/ Homeroom \_\_\_\_\_

Participants Present \_\_\_\_\_

**Review latest progress monitoring data:**

**How can we provide an action plan with more intensive support?**

- Continued Tier II interventions
  - 
  - 
  - 
  -
- Outside classroom interventions
  - 
  - 
  -
- Instructional or curricular adjustments
  - 
  - 
  -

**Next Steps:**

Who will collect data and progress monitoring? \_\_\_\_\_

How often? \_\_\_\_\_

What data points will be used (20 points)? \_\_\_\_\_

Next meeting \_\_\_\_\_

Movement to Tier IV?

- No
- Yes Date of Eligibility Meeting \_\_\_\_\_

## Appendix F: Aloha Middle School's RTI Team Meeting Format

### RTI Student Support Meetings

(Based on a 60 Minute Block)

Prior to the meeting: RTI team point person should send out a reminder to all team members that will include:

- The date of the meeting
- The time of the meeting
- The location of the meeting
- The agenda
- What materials/information should be brought

\*It will be left up to the teams to decide if they would like to allocate the different responsibilities to each team member as needed

	<b>What information should be discussed?</b>	<b>What is the purpose and/or what are the next steps?</b>
<b>First 5 Minutes</b>	Review minutes from last meetings, clarify any questions	Purpose: Refresh information for all team members and answer questions  Example of Next Steps: If there is a question that was not answered, please have team point person contact an RTI team member
<b>Next 5 Minutes</b>	Review or clarify the three tiers and the targeted students	Purpose: All team members should be using the same vocabulary and should have the same understanding about information for RTI
<b>Next 40 Minutes</b>	Discuss data, findings, and targeted students	Purpose: To analyze the RTI process to ensure that ALL students are increasing in academic performance (using the RTI interventions)
<b>Last 10 Minutes</b>	Create next agenda and assign and discuss who and what data needs to be collected, reviewed further, and/or what additional information is needed to move forward	Purpose: All team members will have a clear understanding of what is expected for the next meeting

## Appendix G: Aloha Middle School's RTI Timeline

### Timeline

Date	Procedures to be followed
May 2010	<ul style="list-style-type: none"> <li>• 6<sup>th</sup> / 7<sup>th</sup> grade teachers give list of target kids for special place or for RTI reading and math tests</li> <li>• Behavioral lists that will come from articulation</li> <li>• Triangulation will be done with quantitative assessments</li> <li>• Documentation begins (counselors, coaches, admin starts entering data so forms will be ready to review come beginning of school year)</li> <li>• Prospective teams meet and designate an RTI point person per team. This person will receive professional development over the summer to manage this position and role.</li> </ul>
July 2010	<ul style="list-style-type: none"> <li>• Students already placed in special classes. Initial RTI meetings need to occur. Documentation will be reviewed at initial meeting. Team can use PRIM to initiate Tier 1 interventions.</li> <li>• RTI training on data collection, timeline, process, interventions (using PRIM), importance of accountability.</li> <li>• Team outlines professional development goals in order to meet the needs of their students.</li> <li>• Administer learning style survey to students to determine best ways to differentiate and instruct.</li> </ul>
1 <sup>st</sup> quarter Progress Report Time	<ul style="list-style-type: none"> <li>• Review RTI information and assess student's response to the intervention(s). For those who are responding to Tier 1, continue and transition out if needed. For those who are not responding, hold conferences and begin Tier 2. There may also be new students that are becoming a concern, can backfill Tier 1 and begin documentation.</li> </ul>
October 2010	<ul style="list-style-type: none"> <li>• Measure response to interventions by analyzing grades, data points, etc. Those students, who do not show progress in Tier 2, can get a program change for more intensive intervention. Consultations with school psychologists to make suggestions- all data will be sufficient by then as evidenced by RTI documentation. Those who are doing well in Tier 2, continue. Look for those to transition out and in. Review quarterly data/referrals on RTI students.</li> </ul>
Quarter 2 Progress Report Time	<ul style="list-style-type: none"> <li>• Repeat process. Review data on those students who received program changes. Is there any progress?</li> </ul>
December 2010	<ul style="list-style-type: none"> <li>• Repeat process. Review quarterly data/ referral on RTI students. Look for any students to refer to special education and look at possible students to rescind. Schedule meetings with parents to discuss program changes. Profession development assessed.</li> </ul>
January 2011	<ul style="list-style-type: none"> <li>• Initiate any additional program changes. GMRT and math progress testing</li> </ul>

<b>February 2011</b>	<ul style="list-style-type: none"><li>• Repeat process. Review data</li></ul>
<b>March 2011</b>	<ul style="list-style-type: none"><li>• Repeat process. Review data. Students who were evaluated for SPED and made eligible are placed and programmed (should only be 1-2 students).</li></ul>
<b>Quarter 3 Progress Report Time</b>	<ul style="list-style-type: none"><li>• Repeat process. Review data.</li></ul>
<b>May 2011</b>	<ul style="list-style-type: none"><li>• Review data. Close out documentation in order to pass up to next grade.</li></ul>

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