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Tier 2 Interventions: A School Improvement Plan

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Capstone Project: A School Improvement Plan

Northwestern College, Orange City, Iowa

Abstract

The school improvement plan is to develop a process to implement an effective tier 2 intervention plan as part of the Multi-Tier System of Supports (MTSS). Three themes emerged: need for professional development, ways to schedule interventions and how to use data-based decision-making. Professional development will occur during pre-service days. During professional development teachers will learn methods of intervention, how to use data to drive interventions and utilizing standards in tier 2 interventions. Department teams will meet and analyze data to create and identify interventions for students in need. Finally, the plan proposes RTI scheduling during protected time at the end of the day, based on data obtained during benchmarking and state testing to reach a school goal of 80% proficiency. Progress monitoring will be used to track the success of interventions.

Keywords Multi-Tiered System of Support (MTSS), Response to Intervention (RTI), professional development, tier 2 intervention, scheduling

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Tier 2 Intervention: A School Improvement Plan

Every Student Succeeds Act (ESSA) was passed into law in December 2015. This law identifies evidence- and place-based interventions to be developed at the local level of education (U.S. Department of Education). Since ESSA was passed, schools have worked to identify and provide evidence-based interventions to students. The majority of research has been done in the elementary level of schools. Many obstacles occur in the secondary setting that can create issues with integrating tier 2 interventions for students into the school day (Bartholomew & De Jong, 2017). Educators agree on the effectiveness of tier 2 interventions at all levels. The problem is many districts struggle to find the most effective way to provide those interventions at the high school level, especially in a rural setting.

The purpose of this school improvement plan is to develop a process to implement a good tier 2 intervention plan as part of the Multi-Tier System of Supports (MTSS). This will include preservice professional development training, identification and documentation processes and a process of organizing and selecting students during set aside Response To Intervention time (RTI). It was found that professional development is important to help teachers feel comfortable implementing tier 2 interventions for their course subjects (Fraser, 2016). Documentation is required to meet the data-based decision-making process of MTSS (Iowa Department of Education, 2023). The goal is to help teachers be more effective during this RTI time, and also reach the correct students in an organized manner.

Peer-reviewed journals were found in Northwestern College's DeWitt Library in Orange City, Iowa through the ERIC & Education Database and also through Google Scholar. Articles included were published within the last fifteen years. The author focused their research on finding schools implementing tier 2 RTI times, as well as research about effectiveness and issues

at the secondary level. The scope of the research in this document includes elementary, middle, and high school settings. Research also includes RTI time within the classroom setting, outside of school, and built into the school day. This wide range of research allowed study of effective tier 2 interventions and how they can be utilized in the secondary setting.

According to the data, to provide improvement in tier 2 interventions, the school district should implement a few key concepts. Anyon, et al 2016, noted the importance of starting with professional development to train school personnel as the current, best tier 2 intervention practice. Next the school will designate a specific time during the day that tier 2 interventions must occur, during which teachers document those interventions according to the district's MTSS handbook (Frank Webb & Michalopoulou, 2021). Finally, districts will need a way to organize students to place them with teachers that can provide those tier 2 interventions. The author believes implementing this plan will increase engagement in tier 2 interventions and the school will see growth on students' assessments.

Overall, if the school implements these key ideas, students will be provided the tier 2 interventions they need. This school improvement plan will cover these three main components identified in the research. The preservice professional development will help prepare teachers to properly use the new processes to identify students needing interventions and access effective intervention tools available. Documentation and identification will follow the MTSS school handbook for tier 2 interventions. Finally, the school will improve the process allowing teachers to properly organize and select students to best serve students' needs.

Review of the Literature

After review of peer-reviewed journals found in Northwestern College's DeWitt Library in Orange City, Iowa through the ERIC & Education Database and through Google Scholar, four

main themes emerged. First, the theme of understanding interventions and the need for interventions. Next was the need for professional development for all staff involved in interventions. After professional development, scheduling concerns must be addressed; when and how these interventions will take place can be a cause for concern at the secondary level. Finally, the last theme that emerged is the use of data-driven decision making to identify the students in need of assistance, including who is involved in collecting the data and who is involved in the decision making. The literature findings of these four themes will be covered throughout this literature review.

Understanding Interventions

Students enter a classroom in a different place in their learning than their peers. Due to that fact, schools and teachers must find ways to support struggling learners in their classrooms. In 2015, *Every Student Succeeds Act (ESSA)* passed; this law requires schools to develop intervention plans for struggling learners (U.S. Department of Education). Due to this law, Multi-tiered system of supports (MTSS) and an emphasis on Response to intervention (RTI) became a focus for schools.

There are four essential components of the MTSS model: (a) screening, also known as universal screening, which is a systematic process to using effective screeners to assess and identify a student's current achievement level; (b) a multi-level prevention system, which utilizes evidence-based instruction and interventions to support students in tier 1 classroom instruction, tier 2 small group intervention with at-risk students, and tier 3 individualized interventions for students not responding to the small group support; (c) progress monitoring, which assesses and provides a report on students' progress and use of a data system to gauge students' responsiveness to the instruction; and (d) data-based

decision making, which involves data collection and data analysis, in screening and progress monitoring to make decisions regarding instructional level, instruction and intervention strategy selection, placement in the tiered system, and referral to special education services. (Center on Multi-Tiered Systems of Support, 2022a, as cited in Zhang et al., 2023 p.3)

According to the nationwide analysis conducted by Zhang et al. (2023) all but two states have implemented a three-tiered model for intervention. Within a three-tiered model for interventions, “A strong core curriculum and high-quality classroom instruction are the foundations of an effective MTSS framework” (Zhang et al., 2023 p.3). In Bartholomew & De Jong (2017) starting with core instruction, interviews of secondary principals indicate schools must set up processes to identify students who are below grade level and enroll them in appropriate classes or intervention groups. With effective implementation, academic achievement growth has been seen.

In a study on scheduling methodology, Dallas (2017) found an average increase of 4.16 percentile points from fall to spring benchmark testing in reading achievement when using an intervention-based schedule. The same study found that the growth in reading was 5.26 percentile points over the course of two years of using this schedule. Finally, Dallas (2017) found that those receiving tier 2 interventions grew on average 10.71 percentile points more than all students in the previous year. As covered later in this literature review, obstacles occur in the secondary level that affect the implementation of a MTSS intervention model.

The best practice to implement RTI is debated, especially at the secondary level. In an online survey spanning 55 high schools in 33 school districts in Illinois, McGuire (2016) recognized that implementation comes down to the classroom level for RTI, and how a teacher

perceives the intervention has direct impact on student learning. Another finding from McGuire (2016), includes that there is a disconnect between perceived importance and actual implemented practice on RTI. In comparison, Lesh et al. (2021), after surveying secondary administrators and faculty members in southeastern United States, claims “with authentic collaboration, meaningful PD, role clarity, reconfigured secondary school structures, and increased MTSS/RTI knowledge, secondary administrators should partner with special education teachers to lead the systems change to build consensus to create a sustainable secondary MTSS/RTI infrastructure.” Findings also included that years of experience had a small positive effect, but years at current position had a negative effect on MTSS academic or instructional beliefs (Lesh et al., 2021). Similarly, after a year of implementation of RtI, Brinkley (2016) found that for successful implementation of interventions all stakeholders should be kept informed throughout the process. Also, both teachers and students found value in the RTI process after a year case study of implementation of the RTI process. With an organized, student centered implementation, interventions can be successful at all levels of education.

Professional Development

To provide quality interventions, educators need to be trained in best practices for those interventions. Within the review of the literature it is debated who should receive this training, and when they should receive this training. An option is to do this professional development with incoming teachers as part of their preparation program. Ross & Lignugaris-Kraft (2015) executed a case study about providing professional development in a teacher preparation program. In this case study survey, results showed that teachers who participated in this program outperformed other first year teachers and even veteran teachers. Teachers felt the undergraduate program improved teacher performance, student outcomes, and gave teachers involved a unique

set of skills that made them strong teachers. Teachers who took part in the study felt it was worth recommending to others, was an important part of training and was helpful in building relationships. This indicates early professional development teaching interventions is successful in helping teachers be successful. While Ross & Lignugaris-Kraft (2015) studied a teacher preparation program, the Frank & Michalopoulou (2021) study was on the uses of school psychologist, found that professional development for all school personnel is important. Their study included teachers, administration, para-professionals and psychologist in those who need professional development on interventions.

Not only is when and who should receive professional development on interventions debated, but also what should be included in the training. In a case study on implementing RTI in a small high school over the course of two years, Fisher & Frey (2013) found success if professional development focused on tier 1 instruction. This focus on guided instruction, increased time spent on productive group work, and teachers having purpose and modeling saw an increase in student engagement with few students needing tier 2 instruction. The nationwide RTI analysis of Zhang et al. (2023) found that 49 states have implemented RTI with support for their LEA. Utilizing the support of local LEA, staff can be trained in current best practices of intervention and core curriculum from area experts.

In comparison, both Anyon et al. (2016) and Robinson et al. (2013) found staff felt the need for continued professional development throughout the year, and throughout implementation. Anyon et al. (2016) performed a study that checked the effectiveness of professional development on interventions in one K-8 school. “School staff members perceived that among the most important supports for high-quality implementation of RC were initial professional development and ongoing support to reinforce skills” (Anyon et al., 2016, p. 6).

Teachers need the support throughout the whole process of implementation of RTI. Professional development is necessary for all types of interventions, including behavior, social, emotional or academic learning. In interviews of two school districts staff based on RTI implementation Robinson et al. (2013) found staff members felt step-by-step implementation in schools increased staff buy-in for all levels of the MTSS process.

In interviews with six principals in Canada, Fraser (2018), found there is a better buy-in for RTI from staff members if they are part of the planning process. Additionally, communication and action plans needs to be clear in professional development opportunities for staff. Professional development is a necessary factor in implementing a strong RTI model in a school system (Fraser, 2018). In a Lesh et al. (2021) survey of 300 secondary educators, teachers did not perceive themselves as interventionist and it was recommended to include extensive and intensive professional development. Overall findings show if staff is properly trained and supported, they will more effectively implement a successful MTSS/RTI system. Finally, Bartholomew & DeJong (2017) found six out of nine secondary principals surveyed indicated they were inexperienced with RTI and four out of nine principals indicated a lack of RTI training. Professional development needs to be early, often, and inclusive of all educators that will be part of the RTI process.

Scheduling Concerns

Scheduling tier 2 interventions can be difficult in a secondary setting. In many cases, unlike elementary settings, secondary settings do not have specific teachers as interventionists and this task is left to the general education teachers. Since general education teachers in secondary settings have several different classes throughout the day, finding time for tier 2 interventions can be a struggle. According to Dulaney's (2013) qualitative case study of a middle

school's RTI journey, school leaders need to identify resources and build a sustainable infrastructure to be able to schedule the necessary time needed to implement RTI. Scheduling includes time to collaborate with other educators, as well as scheduling time for tier 2 interventions.

Throughout the years different secondary school structures have emerged. Marquez (2016) performed an analysis of these different structures and their effect on student achievement. These structures were compared to the traditional eight-period model. Block scheduling is when classes are longer than 50 minutes and students typically have four classes in one day. There is also a modified block that alternates classes day by day, but classes are still over 50 minutes long. Marquez (2016) noted that block scheduling could have built in interventions during class. Other aspects of block scheduling noted were reported student boredom due to the length of each class and also if students miss an extended number of days, they fall substantially behind. Another structure, flexible modular, can open up teacher schedules for intervention times throughout the day, but it was noted that student schedules can be difficult to understand and hard to create. The quantitative research done on these secondary school scheduling types resulted in no significant difference in student achievement (Marquez, 2016).

The School Application Model (SAM), is an equity-based inclusion model targeting outcomes of all students, including those with disabilities, with an effort to provide access to general education content to all. This model uses high impact interventions built into a framework that would phase out separate tier 3 instruction. Choi et al. (2020) did a case study on the implementation of SAM. Their results showed a statistically significant increase in mean math scores from 36.94 to 40.28, but did not show a statistically significant increase in reading scores between IEP students in SAM vs those not in a SAM framework.

Concerns about secondary implementation were identified in a Thomas & Conoyer (2020) survey of teachers in Ohio. Many difficulties have already been identified for secondary students compared to identifying students in the elementary setting; tier 2 interventions at the secondary level are not as responsive for the students, primarily due to the fact that group sizes tend to be larger than at the elementary level. Those working in secondary settings perceived involving parents in the RTI process ($M = 2.80$, $SD = 1.13$), the Problem-Solving Team Process ($M = 2.76$, $SD = 0.99$), staff understanding of RTI, ($M = 2.74$, $SD = 1.05$), and the screening and utilization of screening data ($M = 2.72$, $SD = 1.09$), as being the most challenging obstacles (Thomas et al., 2020). Isbell & Szabo (2014) as cited by Thomas & Conoyer (2020), suggest these challenges may be the result of scheduling logistics, required credits, and range of content needed to be covered.

Tier 2 interventions can be built into the day. Dulaney (2013) explains a process for placement of students needing tier 2 interventions and which classes were chosen for student to miss portions of those classes. Students did not leave classes that were required or had end-of-year assessments. Scheduling must be considered to ensure students are not falling behind in other areas for interventions in core subjects. Unlike Dulaney's 2013 study on interventions which removed students from portions of class, Brinkley (2016) studied the effects of a separate class for tier 2 interventions for 9th grade reading. Students that took an additional reading class to focus on tier 2 interventions saw growth achievement gains by the end of the year in reading.

A final alternative was covered by Fisher & Frey (2013), in their case study of a high school's implementation of RTI. This high school originally had their tier 2 interventions as a voluntary after school help room. Throughout their two-year study, Fisher & Frey (2013) saw the tier 2 instruction evolve. Critical aspects to the evolution included the addition of progress

monitoring systems, and during the second-year, teachers requested longer lunch periods to give students another time for supplemental interventions. At the end of the study, they still had their after-school program, but attendance had increased and the progress monitoring helped them to identify students who may need the additional tier 2 interventions.

Data-Driven Decision Making

The final theme that emerged from the literature review was the need for data-driven decision making. This can come in the form of progress monitoring benchmarking, formative assessments, summative assessments, or state testing data. Elementary and even into middle schools have systematic processes for identifying students in need, yet at the upper secondary level this becomes less common. Creating a process to identify students in need is the first step to creating an effective intervention system. “Strong processes must be in place for how RTI works and what type of data and documentation will be monitored throughout the year” (Barton et al., 2020). By having data documented, trends can be easily viewed and adjustments can be made to drive instruction and interventions.

In MTSS, at least 80% of students should be successful in a tier 1 setting. Maniglia (2017) performed a case study on the implantation of RTI processes and identified tier 1 as the place to start. If less than 80% of students are responding positively to the core instruction there may be a curriculum or instructional issue (Maniglia, 2017). From there teachers should move into what the data is telling them. If 80% of students are successful, the next step is to identify the struggles of the other 20% and how teachers can help them. “Educators are able to use data from progress monitoring to tailor instruction to meet the individual needs of students by increasing the frequency and intensity of instruction, by scaffolding instruction, providing differentiated instruction informed by assessment results and providing students with ample

opportunities to practice new skills” (Maniglia, 2017). In a Thomas et al. (2020) survey, elementary teachers perceived that decision making with teams was most difficult. It is important that progress monitoring data can be standardized to make collaboration with other educators easier.

Schools can use student grades as an indicator, then use processes to help students to raise those grades. Fisher & Frey (2013) used observations of classrooms and teacher interviews in one high school over the course of two years to collect qualitative and quantitative data on RTI implementation. In the observations they noted that at the beginning of the study, 55% of students were failing at least one class on their progress reports. After implementing progress monitoring with course competencies, only 12% had not passed a class and were enrolled in an extended school year. A competency-based grading system was able to provide teachers with information about the students’ level of understanding and pinpoint areas of weaknesses (Fisher & Frey, 2013).

Using data is an effective way to identify students for curriculum gaps. It is not a one size fits all system for when to perform these interventions, and school systems need to adjust to fit their structure and students. A Maniglia (2017) case study found educators unanimously agreed that additional layering of instructional tiers should be scheduled so that students do not miss tier 1 general education classroom instruction. Difficulty comes in scheduling these interventions. Additionally, some interventions are needed that are not curriculum based. Sammallahti et al. (2022) did a study on the effects of math anxiety on student performance. Math anxiety affects a student’s ability to show their knowledge of the curriculum. When given specific interventions to work on their math anxiety, Sammallahti et al. (2022) found these interventions encouraged

participants to adopt a more positive attitude toward math by implementing methods that help them to handle their feelings and levels of math anxiety.

The Maniglia (2017) case study noted that DIBLES and other progress monitoring tools were used to breakdown students and group them into the multi-tiered system. Similarly, a Berkeley et al (2020) analysis of all 50 states' MTSS/RTI protocols, found many states have a roadmap of data collection to identify students for special education services. In comparison, many other states look at the tiered model for all general education students, having special education identification as a separate process. A school must create a roadmap and make decisions based on that data. Having this decided at the beginning of the year will help teachers to identify and schedule students for interventions. "The RTI system facilitates instructional decisions based on data collected during universal screening, early intervention, tiered instruction, and progress monitoring services. Use of a problem-solving framework in making decisions based on student data is at the core of most RtI models and processes" (Dulaney, 2013). Bartholomew & De Jong (2017) found that many principals admitted to an inconsistent approach to progress monitoring and tend to monitor too many students.

Interviews in Bartholomew & De Jong (2017) also found there was a reluctance of teachers to change how they teach and also a lack of a useful universal screener. Even when these were not an issue, there were still staffing issues for progress monitoring, followed by lack of time and knowledge of how to use the data. Robinson et al. (2013) found similar findings in rural elementary schools: resources and time needed to be given to make data-based decisions. Frank & Michalopoulou (2021) found that an MTSS coordinator is beneficial to providing staff with decision-making points and helping with organization of the data. This is why it is

important for educators to know what data will be collected and how they are expected to utilize that data in decision making for interventions for students in need.

School Profile

School Performance

The Colo-NESCO Community School District scores identically to the state average of 50% for average school achievement in both mathematics and English/language arts. The district had 50% of the students meet their growth goal in mathematics, and 58% of the students met the growth goal in English/language arts. In math, both subgroups of IEP and Low Socio-Economic received 48%, while they received 49% and 63% respectively in ELA. Next, looking at proficiency, the district has 73.9% of students proficient in math, and 74.8% of students proficient in ELA, both above the state average. The subcategory of special education has 47.6% proficient in math, and 23.8% of students proficient in ELA. In math, special education is well above the state average of 28%. Unfortunately, ELA proficiency for IEP students is below the state average. Finally, science is tested in 5, 8, and 10th grade. In these grades Colo-NESCO was 69%, 56%, and 66%. 5th and 10th grade were above the state averages, but 8th grade proficiency was below the state average (State of Iowa, 2023).

Community Characteristics

Colo-NESCO Community School District serves students in three towns: Colo, McCallsburg, and Zearing. From data collected by the U.S. Census Bureau (2020), Colo has a population of 845, with a median household income of \$77,188, with a 66.2% employment rate. Of those living in Colo, 96.7% are white, 2% are Hispanic, and 1.1% are Asian. McCallsburg has a total population of 353, median household income is \$70,568, with a 72.2% employment rate. Of the 353 living in McCallsburg, 92.9% are white, and 2.8% are Hispanic. Finally, Zearing has

a population of 528, with a median household income of \$62,917, and an employment rate of 66%. Of the 528 living in Zearing, 93.8% are white and 1.5% are Hispanic (U.S. Census Bureau, 2020).

Student Characteristics

According to the Iowa School Performance Profile, Colo-NESCO has K-12 enrollment of 349 students, with a 4-year graduation rate of 94.74% and a 5-year graduation rate of 100%. Fourteen percent of students receive special education services, and 0.9% of the students are receiving ELL services. Students at Colo-NESCO who are of Low Socio-Economic Status is 39.3%. Colo-NESCO Schools has a student ethnicity breakdown as follows: 92% of students are white, 5.4% of students are Hispanic, 0.3% black, and 2.3% multi-racial. Of the 349 students in K-12, 53.3% are male, and 46.7% are female. The Junior/Senior High School is an ESSA Support targeted year 2 school because in 2022 the school missed the 95% ISASP participation requirement in the subcategory of Low Socio-Economic Status. In that subcategory, only 94.92% of Low Socio-Economic students participated in testing. The middle/high school has been targeted in the past for special education students not meeting the growth goal.

Parent Involvement

Parents are an important part of the school district and student success. Parents can stay informed of their student's progress through the online record management system, JMC. They can also be added to Google Classroom for each class, an education platform that posts homework assignments. Each semester parents can choose to participate in parent-teacher conferences, but also can reach teachers through email or by calling the school. Parents can take part of our Career and Technical Education advisory committees, Student Academic Integrity Committee (SIAC), and finally the Colo-NESCO Booster Club. Colo-NESCO has several social

media platforms that help parents to stay connected and a school website where parents can check for school activities and calendars.

School District Mission and Vision

According to the school website, “The Colo-NESCO Community School District is committed to guiding and nurturing the academic, emotional, physical, and social development of all students, while promoting lifelong learning and citizenship in today’s rapidly changing world.” The school district is a 1-1 school with Chromebooks for each student. Teacher’s emphasize utilizing technology in the learning process. The school has a focus on the four C’s of learning: collaboration, creativity, critical thinking, and communicating; these prepare students for lifelong learning and citizenship.

School Characteristics

The Colo-NESCO Community School District is a rural, 1A school district located in northeastern Story County. The elementary in Zearing, IA, servicing PK-4 grade. The Junior/Senior High School is located in Colo, IA with 5-12th grade. The school district has the following administrators: elementary principal, high school principal and a shared superintendent. The school also received sharing dollars for transportation director, curriculum director, business office, and technology. In 2023, Colo-NESCO had 39 full time teachers, four of them being beginning educators, two part time teachers, and 10 teacher associates.

The 7-12th grade schedule is a modified block schedule. Monday is a late start day with eight 35-minute periods, Tuesday/Wednesday are block days with 90-minute classes, and finally Thursday/Friday are eight period days with 42-minute periods. Tuesday through Friday, the day ends with an advisory period for interventions, meetings, and study hall. Colo-NESCO offers many extra-curricular activities, including athletics, fine arts, National Honor Society, student

council, speech, TAG, FCCLA, FBLA, and FFA. Offering many activities provides students with many ways to be involved in the school.

Student Learning Goals

The Colo-NESCO School district has set three student learning and achievement goals. First, ensure that all students show growth pre-kindergarten through twelfth grade. This is measured through universal screeners, progress monitoring, and ISASP scores. The second goal is 80% of students in grade K-8th will be above benchmark on literacy and math FAST Assessments by the year 2025. FAST benchmarking occurs three times throughout the school year. The final goal for student learning is by the year 2025, 80% of students in grades 9th-11th will be proficient in reading and math based on ISASP scores. ISASP is taken annually in the spring term.

Colo-NESCO is currently with the following data as it pertains to the student learning goals. For goal one: all students show growth PK-12th grade using FAST data for 5-8th grade. From fall 2023 to winter 2024, 58% of 5-8th graders showed growth in aMath, 69% of 5-8th graders showed growth in aReading, and 89% of 5-6th graders showed growth in CBMR. Goal two: 80% of students K-8th will be above benchmark on FAST assessments. At the end of the 2022-2023 school year on the earlyMath FAST test given to K-1st grade, the first grade reached the 80% goal, in the aMath given to the 2-8th graders, only the 2nd and 3rd grade reached the 80% goal. In K-8th grade, no grades reached the 80% benchmark in the CBMR (K-6th) or aReading (7-8th). Overall, on CBMR the K-6th grade was 61% proficient. The final goal is 80% of 9-11th graders will be proficient of ISASP scores for math and ELA. For math all three grades were 70% proficient, and for ELA the 9th and 10th grade was both 80% proficient, and the 11th grade came in at 79% proficient.

Teacher Instructional Strategies

Colo-NESCO is trying to build lifelong learners utilizing engaging instructional strategies. Instructional strategies that are utilized and looked for involve the 4 C's of learning; collaboration, critical thinking, creativity, and communication. Teachers also focus on Explicit Instruction strategies from Anita Archer. This is seen in lesson plans and activities students take part in throughout the year. Teachers must plan a guest speaker every year in their content. This is to engage students' understanding that there is a connection between what they are learning and the real world.

Assessment Practices

The school is a standards-based grading school running on a 4-point scale for all assessments centered around the state standards. Every class must have at least 90% of their final grade based on summative assessments, ensuring that a student's grade reflects their knowledge on the standards for that class. The focus on standards keeps the curriculum aligned and prepares students for state assessments.

Professional Development

Colo-NESCO runs a late start every Monday to provide teachers time for professional development. These Mondays rotate between Professional Learning Communities (PLC), building meetings, grade band meetings, individual career development plans (ICDP), and department meetings. At the beginning of each year building goals are established and drive the professional development every week. Building goals for the 23-24 year include implementing reading and writing strategies throughout all courses, communicating frequently with parents, students and each other about student achievement, and identifying and guiding student leaders to develop school pride.

Curriculum

In the Junior/Senior High School building, both the math and English departments have worked on choosing curriculum and standards alignment. The math department worked with the local AEA to choose a math curriculum to meet student needs. Kendall Hunt Illustrative Mathematics was chosen for their 6th grade math through Algebra 2 classes. They are in the 2nd year of full implementation of this curriculum. The ELA department is currently going through that same process with the local AEA. A curriculum is expected to be chosen to implement at the start of the 2024-25 school year.

Once the tier 1 curriculum is implemented, a focus on tier 2 interventions is the next focus. This has been mapped out by the MTSS committee as the next steps in reaching the school district's goals. Currently, tier 2 interventions occur during a designated time at the end of the day, but is not data-driven and little training has occurred to help teachers in this process.

Needs Assessment

The Colo-NESCO School board has set goals of 80% proficiency for all students and all students showing growth by the year 2025. To reach this goal, staff must evaluate the current curriculum and instruction and find ways to better them. The Junior/Senior High School has already taken steps to improve the tier 1 instruction by looking at curriculum for ELA and mathematics. Even with implementing new tier 1 curriculum and instruction a need still exists in the area of tier 2 interventions. The next steps are to dedicate protected time to identifying students and performing tier 2 interventions to help students succeed. One way to identify students who need tier 2 interventions is by course competencies. "The competency-based grading system provided teachers with accurate information about students' current level of understanding as well as areas of weakness (Fisher & Frey 2013, p. 106)." Teachers at Colo-

NESCO are already grading using standards, the next step will be to use those scores to guide interventions for students.

Using students' scores on standards will give teachers real-time data to identify which students need the extra interventions. The next need teachers will have is guidance on what tier 2 interventions look like and how they can be effective. Anyon et al. (2016) observed in focus groups that teachers felt professional development was the most influential support for implementing interventions. The local AEA and school instructional coach can work together to bring this information and training to the staff

The final need to be addressed is finding and organizing protected time for staff to implement these tier 2 interventions. In surveys of administration, Barton et al.(2020) found strong processes need to be in place for how RTI works, including documentation and data collection. Many systems have been tried in the past, but for tier 2 interventions to be data-driven and effective there should be protected time where a teacher is only focused on interventions. Tis protected time for interventions will benefit Colo-NESCO Schools the most. By being data-driven, they will be able to track the effectiveness of the interventions and hopefully see improvement towards the school district's goal of 80% proficiency and all students showing growth.

School Data & Analysis

Data Collection

Colo-NESCO Community School Board of Education set goals based on student proficiency and growth in the areas of math and reading. The district uses FAST and ISASP data to measure outcomes. In the Junior/Senior High School, tier 2 interventions are handled by a variety of teachers. In the 5th grade, Colo-NESCO uses a Title 1 teacher to provide

interventions for both reading and math. In the 7-12th grade, tier 2 interventions are left up to the general education teacher. Looking through the data provided by FAST and ISASP, certain data points show areas in which the school is doing well and also areas where the school should make adjustments.

Table 1 (below) shows Reading FAST data tracking grade level proficiency over the course of five years.

Table 1

Colo-NESCO FAST Reading Trends

	2022-2023			2021-2022			2020-2021			2019-2020			2018-2019		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
K	95%	88%	63%	81%	78%	59%	88%	79%	61%	79%	76%	COVID	81%	67%	48%
1	35%	60%	69%	56%	72%	73%	32%	31%	38%	68%	68%	COVID	58%	59%	58%
2	79%	79%	78%	46%	48%	58%	67%	67%	65%	64%	64%	COVID	70%	71%	70%
3	44%	56%	56%	53%	64%	64%	63%	75%	68%	68%	71%	COVID	60%	55%	53%
4	67%	59%	50%	68%	77%	83%	78%	61%	70%	78%	67%	COVID	74%	66%	79%
5	69%	74%	62%	58%	64%	72%	75%	81%	69%	59%	79%	COVID	75%	74%	63%

	2022-2023			2021-2022			2020-2021			2019-2020			2018-2019		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
6	48%	45%	52%	64%	68%	74%	64%	74%	74%	72%	88%	COVID	84%	76%	84%
7	59%	59%	59%	58%	61%	67%									
8	74%	70%	67%	55%	59%	71%									

Table 2 (below) shows Math FAST data tracking grade level proficiency over the course of five years. FAST benchmarking occurs three times a year: fall, winter and spring. This benchmarking assessment tests grade level math standards. Students must complete the assessment without a calculator.

Table 2

Colo-NESCO FAST Math Data Trends

	2022-2023			2021-2022			2020-2021			2019-2020			2018-2019		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
K	82%	76%	71%	77%	93%	78%	65%	86%	71%	47%	73%	COVID	67%	67%	57%

	2022-2023			2021-2022			2020-2021			2019-2020			2018-2019		
	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring	Fall	Winter	Spring
1	96%	68%	81%	84%	92%	88%	50%	62%	72%	77%	91%	COVID	50%	63%	62%
2	83%	87%	100%	87%	89%	88%	76%	95%	90%	88%	92%	COVID	78%	84%	89%
3	92%	96%	96%	81%	82%	82%	71%	79%	68%	90%	79%	COVID	75%	70%	63%
4	86%	86%	77%	73%	73%	79%	56%	43%	55%	63%	58%	COVID	71%	72%	84%
5	69%	68%	69%	53%	48%	59%	75%	63%	63%	79%	63%	COVID	59%	51%	54%
6	65%	58%	65%	75%	58%	74%	71%	74%	80%	81%	78%	COVID	72%	72%	78%
7	59%	68%	59%	84%	71%	78%									
8	74%	74%	78%	70%	66%	75%									

Both tables show the percent of students proficient in FAST testing. At the end of the 2022-2023 school year, no classes met the 80% goal in ELA, and three grades met the 80% goal

in math. Students change buildings and interventions after fourth grade and again after sixth grade. Every class shows a decrease in proficiency percentages from fourth grade to fifth grade in both reading and math. In fall 2021, the seventh and eighth grades began to take the FAST benchmarking assessment. In the years since, the same decrease in scores can be seen between sixth and seventh grade.

The second school board goal was to be at 80% proficiency on ISASP tests in grades 9-11. Table 3 (below) gives the Colo-NESCO high school 2023 ISASP proficiency percentages.

Table 3

Colo-NESCO High School 2023 ISASP Proficiency

Grade	Reading	Math
9	77%	67%
10	77%	67%
11	79%	69%

In 2023, reading proficiency is in the upper 70% proficient. Small class sizes mean the high school is under the 80% goal by one or two students in reading. In all three grades, math is in the upper 60% proficiency. In both reading and math, these percentages are above the state average, but will need to see improvement to meet the school board's goal.

Strengths

Strengths of Colo-NESCO currently can be seen in ISASP scores for reading at the high school level. Students are showing proficiency near the school boards goal of 80%. Following lower classes through the trends, Colo-NESCO is doing well, showing a higher percentage of proficiency at the end of each school year. Kindergarten through fourth grade shows an upward

trend of proficiency through the years. This indicates students who are already proficient are staying proficient, and many students who are not proficient are reaching proficiency by the conclusion of fourth grade.

Weaknesses

A weakness is found in the middle school setting. A substantial drop in proficiency scores are seen after fourth grade, and again after sixth grade in both reading and math. Another weakness is found with the high school math proficiency. Though it is consistently around 70%, adjustments need to be made to increase 10% to reach the goal.

Other Assessment Needs

These figures are just broad percentages by grade. Other data should be collected to dig deeper into trends. Progress monitoring assessments may be needed in the middle school to identify where the disconnect is occurring for the decrease in proficiency. Other assessments are needed to identify students for tier 2 interventions, also assessments for tracking effectiveness of interventions.

Action Plan

When implementing interventions, teachers will need to be supported. This will need to include professional development on proper intervention techniques. Next, identifying students that need these interventions through progress monitoring and standards. After identifying students, a schedule will need to be created that gives teachers protected time to implement these interventions. Finally, teachers will need to track and reflect on the effectiveness of interventions being used.

The first part of this action plan is to provide professional development for new and veteran teachers on tier 2 interventions. In a survey of 300 administrators and secondary staff,

Lesh et al. (2021), found that there is need for extensive and intensive professional development, role clarity, and fidelity for implementation of interventions. This professional development will be provided with help from the local AEA, and the Colo-NESCO MTSS committee. Professional development needs to occur early in the process, it will need to be scheduled at the beginning of the year in the teacher in-service days and cover identification, methods, benchmarking for interventions.

Colo-NESCO has professional development Monday mornings for 90 minutes. Utilizing professional learning communities, and department team days. Staff will work together to analyze FAST, ISASP, and class assessments to identify students in need of intervention. These times should also be used to identify what topics should be taught in the interventions for each student. Data-based decision making were found to be a struggle in a survey completed by Robinson et al. (2013). The survey found the struggle came from the process being time-consuming. Giving staff time to collaborate will help increase staff buy in, and give staff time to work through implementation. These topics will be reoccurring throughout the school year so staff has time to track and reflect on interventions. Staff will work together to brainstorm and adjust interventions throughout the year to meet students at their ability. Table 4 (below) is the professional development rotation that would allow teachers time to work together to plan interventions in their content area.

Table 4

2024-25 1st semester Professional Development Schedule

Date	MS/HS PD
8/26/2024	Building
9/2/2024	No School Labor Day

Date	MS/HS PD
9/9/2024	PLC
9/16/2024	ICDP/MTSS meeting
9/23/2024	ICDP
9/30/2024	Department/Data Day
10/7/2024	PLC
10/14/2024	Building
10/21/2024	Department
10/25/2024	Full Day PD (End of 1 st Quarter): Finalize Grades, MTSS meeting, ICDP
10/28/2024	PLC
11/4/2024	Building
11/11/2024	Department
11/18/2024	ICDP-MTSS meeting
11/25/2018	ICDP
12/2/2024	PLC
12/9/2024	Building
12/16/2024	ICDP-MTSS meeting
1/6/2024	ICDP
1/13/2024	Building

The professional development schedule will rotate through Professional Learning Communities (PLC), building days led by the instructional coach, department meetings to focus

on standards and interventions, and work time for Individual Career Development Plan (ICDP). Also included is set aside time for the MTSS committee to meet during ICDP days. The MTSS committee would be expected to reflect on math, reading, behavior, and attendance data. If the data shows a need for changes, the MTSS team would make the decisions for those changes. The MTSS committee includes administration, AEA representative, at-risk teacher, school counselor, and teachers from different grade levels and content areas.

The last part of the plan is to create time in the schedule to implement the tier 2 interventions. Intervention time will occur at the end of the day from 3:00-3:30pm Tuesday-Friday. Students will have a study hall period; which teachers can request students to meet for interventions. The school's At-Risk coordinator will place students in teachers' room two to four days a week depending on the teacher availability and the student's needs. This will be based on FAST/ISASP data and current assessment scores. Table 5 (below) shows how students will be placed on a Google Sheet that all teachers can access.

Table 5*Proposed Intervention Time Attendance Tracker*

7th Study Hall		8th Study Hall		9th Study Hall		Math teacher 1		Math teacher 2		English Teacher 1	
<input type="checkbox"/> 7th Student 1	<input type="checkbox"/> 7th Student 2	<input type="checkbox"/> 8th Student 1	<input type="checkbox"/> 8th Student 2	<input type="checkbox"/> 9th Student 1	<input type="checkbox"/> 9th Student 2	<input type="checkbox"/> 7th Student 2	<input type="checkbox"/> 7th Student 18	<input type="checkbox"/> 9th Student 7	<input type="checkbox"/> 8th Student 16	<input type="checkbox"/> 7th Student 5	<input type="checkbox"/> 8th Student 6
<input type="checkbox"/> 7th Student 3	<input type="checkbox"/> 7th Student 4	<input type="checkbox"/> 8th Student 3	<input type="checkbox"/> 8th Student 4	<input type="checkbox"/> 9th Student 3	<input type="checkbox"/> 9th Student 4	<input type="checkbox"/> 7th Student 8	<input type="checkbox"/> 7th Student 9	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 8th Student 9	<input type="checkbox"/>
<input type="checkbox"/> 7th Student 5	<input type="checkbox"/> 7th Student 6	<input type="checkbox"/> 8th Student 5	<input type="checkbox"/> 8th Student 6	<input type="checkbox"/> 9th Student 5	<input type="checkbox"/> 9th Student 6	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 7th Student 7	<input type="checkbox"/> 7th Student 8	<input type="checkbox"/> 8th Student 7	<input type="checkbox"/> 8th Student 8	<input type="checkbox"/> 9th Student 7	<input type="checkbox"/> 9th Student 8	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 7th Student 9	<input type="checkbox"/> 7th Student 10	<input type="checkbox"/> 8th Student 9	<input type="checkbox"/> 8th Student 10	<input type="checkbox"/> 9th Student 9	<input type="checkbox"/> 9th Student 10	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 7th Student 11	<input type="checkbox"/> 7th Student 12	<input type="checkbox"/> 8th Student 11	<input type="checkbox"/> 8th Student 12	<input type="checkbox"/> 9th Student 11	<input type="checkbox"/> 9th Student 12	<input type="checkbox"/> English Teacher 2	<input type="checkbox"/> 9th Student 1	<input type="checkbox"/> English Teacher 3	<input type="checkbox"/> 10th Student 4	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 7th Student 13	<input type="checkbox"/> 7th Student 14	<input type="checkbox"/> 8th Student 13	<input type="checkbox"/> 8th Student 14	<input type="checkbox"/> 9th Student 13	<input type="checkbox"/> 9th Student 14	<input type="checkbox"/> 9th Student 2	<input type="checkbox"/> 9th Student 17	<input type="checkbox"/> 10th Student 7	<input type="checkbox"/> 11th Student 11	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 7th Student 15	<input type="checkbox"/> 7th Student 16	<input type="checkbox"/> 8th Student 15	<input type="checkbox"/> 8th Student 16	<input type="checkbox"/> 9th Student 15	<input type="checkbox"/> 9th Student 18	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 7th Student 17	<input type="checkbox"/> 7th Student 18	<input type="checkbox"/> 8th Student 17	<input type="checkbox"/> 8th Student 18	<input type="checkbox"/> 9th Student 16	<input type="checkbox"/> 9th Student 17	<input type="checkbox"/> Science Teacher 1	<input type="checkbox"/> 7th Student 13	<input type="checkbox"/> Science Teacher 2	<input type="checkbox"/> 11th Student 17	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/> 7th Student 19	<input type="checkbox"/> 7th Student 20	<input type="checkbox"/> 8th Student 19	<input type="checkbox"/> 8th Student 20	<input type="checkbox"/> 9th Student 18	<input type="checkbox"/> 9th Student 19	<input type="checkbox"/> 8th Student 19	<input type="checkbox"/> 8th Student 2	<input type="checkbox"/> 11th Student 6	<input type="checkbox"/> 12th Student 4	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/> 9th Student 13	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

There would also be columns for the other grades. Students who are placed are colored purple to indicate they should be in a teacher's room. The study hall supervisors will take attendance on this Google Sheet using the checkboxes and send selected students to the correct teacher's room. This can run smoothly because Colo-NESCO has under 30 students per grade. Teachers who are not doing interventions would rotate covering study hall during this time of the day. The document would be cleared and reevaluated weekly, and teachers would track interventions by students, type of intervention and benchmarking.

Implementation of School Improvement Plan

Timeline

A timeline needs to be implemented to ensure the success of a school improvement plan. In the new school year's pre-service days, professional development will be provided covering tier 2 interventions. This professional development will train staff in our MTSS goals, proper data collection to identify students in need of intervention, methods of providing tier 2 interventions and finally proper documentation of those interventions. Math teachers will specifically be trained in the approved intervention system, Numeracy Project.

After this pre-service, department teams will have time to work together to start developing intervention techniques, and intervention norms for their departments. During Monday professional development time throughout the school year, department teams will meet on a five-week cycle to analyze the tier 2 intervention data. After the fall FAST testing window, department teams will meet to schedule interventions for any new students identified as needing tier 2 interventions. This process will repeat again after winter benchmarking and spring benchmarking. The last part of the plan is to assign students to locations during intervention time at the end of the school day every Tuesday-Friday. These placements will be based on identified

tier 2 interventions and student current grades. Placements will occur every Monday, with students and their parents being notified of those placements by Tuesday afternoon.

Responsibilities

District

All stakeholders are responsible for the success of this plan. First the district needs to provide the time for training during professional development and also provide protected time for the tier 2 interventions at the end of the school day. The professional development lead team is responsible for creating and providing the tier 2 intervention pre-service professional development. The lead team will be aided by the local AEA to provide the professional development.

Teachers

Data will need to be reviewed by the department teams. These department teams are made up of classroom teachers, special education teachers, and the instructional coach. This team will be responsible for identifying which students will need to be placed into intervention rooms during the tier 2 intervention time. General education teachers will then be responsible for selecting any other students they may need to work with during that time.

Administration

To organize and implement the tier 2 intervention system at the end of the day, the administration, including the principal, at-risk, counselor and instructional coach, will need to evaluate grades and other data to assign students to the proper intervention rooms.

Communication from administration will be sent home to parents and students about the importance of tier 2 interventions so that parents understand why their student is placed and what is occurring during those intervention times.

Students

Students will be responsible for making sure they attend the proper intervention times, and working toward improvement at identified skills. They will need to do progress monitoring and benchmarking in class. Then students will be provided with their own data to know which skills and classes they need to improvement.

Resources

The local AEA will need to provide resources to the professional development team on best tier 2 intervention practices. This will allow the team to create an effective session to the staff. The math department will also need specific training from the local AEA on their Numeracy Project intervention system. Other areas that will need resources is training from FAST bridge on proper usage of their benchmarking and progress monitoring system. The MTSS committee will need to provide resources and documents to help teachers track the interventions they are providing. Finally, a specific ELA intervention system should be considered by administration and the ELA department team.

Progress Monitoring

Progress monitoring is an essential part of a tier 2 intervention system. Department teams will need to identify essential skills students need to be successful. After they have identified these skills, they will need to find ways to monitor students learning of these skills. The department team meetings will include looking at whole group skills, individual progress monitoring and benchmarking data. These decisions will be based on the recommended benchmarking scores on FAST testing. During the data meetings after benchmarking, the team will decide how often a student will meet with teacher for interventions, and how frequently they will be progress monitored. Using the benchmarking data, and ISASP results, the school will be

able to monitor the effectiveness of this plan. This plan should bring grades above the 80% proficient goal the school board has set. Data to place students will be collected from grade checks, progress monitoring, and intervention tracking. If any concerns come up throughout the school year, the MTSS committee will work together to adjust and help find solutions. This may include identifying topics of professional development, data tracking, or other early warning signs.

Barriers & Challenges

There will be barriers and challenges to work around with any plan. Some barriers that may interfere with this success of this plan is teacher buy-in on the importance of interventions. Teachers cannot use this time as a study hall or extra time to prepare for classes. Challenges include notifying students where they should report. There may be times when certain administrators are not available for their Monday meeting to identify students. The final challenge that will impede the success is how to schedule interventions for students who need interventions in multiple classes. Students may not receive the recommended frequency of the intervention for each class they are identified.

Conclusion

Colo-NESCO can successfully implement a tier 2 intervention system at the secondary level with the support of all stakeholders. Starting the year with professional development will help teachers to become more comfortable with providing interventions to students. Lesh et al. (2021), found the need for collaboration through professional development, reconfigured school schedules and role clarity. This professional development will be instrumental in unifying the staff on aspects of interventions and consistency in how interventions are given. Department meeting time throughout the year will help teachers plan ways to best serve student and identify

new students who need tier 2 interventions. This plan addresses concerns about scheduling and professional development that emerged in the literature review.

The purpose of this school improvement plan is to develop a process to implement a good tier 2 intervention plan as part of the MTSS. To follow best practices in implementing RTI, staff will use data from the current FAST and ISASP to address the school board's goal of reaching 80% proficiency in math and ELA. Colo-NESCO will be able to implement this intervention system at the end of the school day allowing this time to be protected and consistent to implement. Students will be placed in their intervention rooms based on current data, and be given data-driven goals to work towards. There will always be a need to review and alter the plan to best serve the students of Colo-NESCO. During the scheduled MTSS committee meetings, continuous review of the data will occur to look for trends that would indicate a need to adjust intervention time and to also celebrate successes seen.

Staff will be supported throughout the implementation of the tier two interventions. Understanding interventions through Professional development and scheduled team meetings, along with data-driven decisions, and scheduled time to administer the interventions are all themes that have been addressed throughout the school improvement plan to implement tier 2 interventions at Colo-NESCO Community Schools.

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