Florida's MTSS | *A Multi-Tiered System of Supports*

This Fact Sheet is a collaborative effort between the Problem Solving & Response to Intervention Project and Florida's Positive Behavior Support projects with the Florida Department of Education and the University of South Florida.

Fact Sheet

Technology Integration in All Tiers of Instruction

Overview

A Multi-Tiered System of Supports (MTSS) is a term used to describe an evidence-based model of schooling that uses data-based problem solving to integrate academic and behavioral instruction and intervention to maximize student outcomes. The integrated instruction and intervention is delivered to students in varying intensities (multiple tiers) based on student need. Technology can provide a wide range of problem-solving solutions at each tier. With all students, and in all tiers of instruction, technology provides options for increasing active, independent student engagement and participation in the instruction and interventions being provided.

Key Elements of Technology Integration

Data Systems. Technology can be used to provide progress monitoring feedback to instructional staff and students in a timely manner. In this case, the phrase "timely manner" means:

- Getting data on formative progress in time to make effective changes in the instructional activities
- Providing instructional scaffolds
- Decreasing barriers to engagement
- Increase the intensity of instruction
- Providing interventions targeting academic and behavioral needs

Easy-to-access online behavior data reports should be available to support the implementation of Positive Behavior Support strategies. Interim and summative data should be readily available online for review and decision making by school and district administrators and school/district-based problem-solving teams. Formative, interim, and summative assessments should be designed to provide students, parents, instructional staff, therapists, and administrators with data in a format that is easy to access and understand.

Instruction/Interventions. Universal Design for Learning principles should be considered when planning the purchase and use of technology devices, technology services, and any instructional materials or digital curriculum. Appropriately selected technology resources can improve student access to instructional materials and content by:

- Removing barriers to active participation in and progression through grade level standards
- Supporting differentiated classroom instruction
- Allowing students to self-select appropriate technological supports

Digital personalized learning systems can provide adaptive instructional activities that are tailored to each student's needs based on grade level standards, goals, and objectives. Computers, mobile devices, and secure social media tools can be used to highlight and teach behavior expectations, acknowledge appropriate behavior, and respond to inappropriate behavior. Digital simulations, virtual reality systems, and gamification strategies can be used to create highly engaging learning environments.

Components of specially designed instruction, such as assistive technologies, accommodations, and accessible instructional materials, should be fully integrated into all aspects of the curriculum. Technology tools can provide students options for self-reflection, perspective taking, exploring cause-and-effect relationships, and practicing reasoning strategies. For students to become expert learners, they must have access to progress monitoring data and a variety of instructional scaffolding tools and technologies that they can use to address academic and behavioral problems. Instructional staff and therapists should explicitly model how to decide which technology tools can be used to reduce instructional and behavioral barriers.

Engagement. Effective teachers know that without students "doing," they will not learn. Student engagement is defined by the degree to which students participate in all aspects of the school environment (academic and social) and assume the appropriate level of responsibility for their own learning and behavior. Gallup's 2013 *State of America's Schools* reported that 55% of US K-12 students are "engaged" in the learning process, while 28% are "not engaged," and 17% are "actively disengaged." Technology may be the key to increasing the active engagement of students by providing a tool that presents content and instruction relevant and interesting to students while highlighting what students are expected to know, understand, and do through grade-level standards. Students have digital access to up-

to-date, just-in-time learning that can increase the depth of knowledge more than ever before. Additionally, students have the opportunity to "sit in the driver's seat" and direct their own learning. Online situational videos can be used to reinforce appropriate social skills and perspectives. Personal behavior tracking apps on mobile devices can give students tools to independently self-monitor feelings and behavior. Software and apps on mobile devices can be used to support appropriate academic behaviors, such as impulse control, understanding non-verbal cues, coping skills, and memory.

"Active learning is associated with improved student academic performance" (Hake, 1998; Knight & Wood, 2005; Michael, 2006; Freeman, et al., 2007; Chaplin, 2009), and "increased student engagement, critical thinking, and better attitudes toward learning" (O'Dowd & Aguilar-Roca, 2009).

Conclusion

Technology provides the vehicle to meet the needs of all learners at their current level and to develop deeper understanding leading to the mastery of grade level expectations. The goal of integrating technology into instruction is to ensure both the generalizability and transferability of the support provided to enhance learning. Providing a mechanism that removes barriers to learning allows accessibility and a means to demonstrate understanding to ensure successful outcomes throughout the learning environment. Through this, students gain the ability to take control of their own learning, becoming expert learners capable of self-monitoring and self-regulation.

Internet Resources

Technology and Learning Connections, USF — http://www.tlc-mtss.com.
Technology Integration Matrix, Florida Center for Instructional Technology, USF — http://fcit.usf.edu/matrix/.
National Center on Universal Design for Learning — http://www.udlcenter.org/.
National Center on Accessible Educational Materials — http://aem.cast.org/.

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