

How an Inclusive Technology Ecosystem Supported the Shift to Remote Learning



Tomball Independent School District (Tomball, Texas)

Challenge Question: How can collaborative leadership and a shared vision support a district's response to uncertainty?

Tomball (TX) Independent School District (TISD) recognized the need for an inclusive technology ecosystem when district data indicated that struggling students could benefit from supportive and accessible technology resources even though they did not have an individualized education program (IEP) or 504 plan. As a result, district leadership worked together to lay the foundation for building an inclusive technology ecosystem. This involved bringing together leadership and staff from education technology (EdTech), information technology (InfoTech), and assistive technology (AT) to collaboratively plan for technology to meet the needs of all students. Although the team acknowledged the challenges of responding to school building closures during the COVID-19 pandemic, and identified areas for improvement, they credited the leadership practices implemented as instrumental in supporting the district's transition to remote learning.

So how did the Tomball team's technology implementation planning and related practices hold up during the shift to remote learning? Through a shared vision for technology and a focus on data for continuous improvement, the team:

- Created a communitywide vision and aligned goals
- Developed a strategic technology implementation plan
- Measured progress for continuous improvement
- Engaged families in collaborative activities
- Developed clear outcomes for professional learning
- Took ownership of infrastructure development.

“To us, the critical piece of continuous improvement is that we have goals and action steps built in, from the district-level strategic plan to the campus plans, encompassing training, support, and outcomes that are targeted by all of the stakeholders.”

— TISD leadership team

District Facts

- Large suburban district 30 miles from Houston
- Approximately 18,000 students
- Approximately 1,800 students with IEPs
- Approximately 1,600 English learners
- District has seen 25% growth in the last year
- Three high schools, two junior high schools, three intermediate schools, and 10 elementary schools

TISD: Setting the Stage

District leadership in Tomball grounded the early work of their [2014–17 technology plan](#) in the National Education Technology Plan, including the five key areas: learning, assessment, teaching, infrastructure, and productivity. Using these materials as a guide, the advisory committee for technology crafted a series of technology goals for the district designed to use the power of technology to improve student learning in both formal and informal settings.



In the 2016–17 academic year, TISD began a pilot study of selected technology tools as well as a professional development program to support teachers (21st Century Teachers Academy) and AT team trainings. Various technology tools were reviewed and evaluated to ensure:

- Safety and security for students
- Alignment with the existing technology infrastructure
- Ease of use
- Interoperability with a variety of operating systems and AT devices
- Ability to use tools online and offline
- Parity across student populations, quality of customer support
- Cost

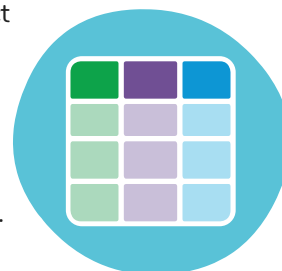
A key part of the implementation plan included an agreement that district and campus administration would create dedicated time for teachers, students, and families to receive training on technology tools; in addition, the instructional technology department agreed to provide training support.

How Leadership Practices Laid the Foundation for Success

District data were collected during the pilot to help inform technology implementation efforts and refine goals. Data showed that a large proportion of students benefitted from curriculum-access tools made available to their peers with disabilities, IEPs, or 504 plans. As a result of these findings, the district decided to look at how best to align their existing AT and EdTech tools to better meet the needs of all students. The AT department proposed a collaborative project between general education and special education to increase access to accessible technology tools for all students. The resulting committee included representation from information technology, general education, special education, instructional technology, administration, English language educators, and related services personnel who collaborated to conduct a needs assessment identifying primary barriers and challenges from each department's perspective. Team members were so impressed by the impact of the selected tools

on improving curriculum access for all students, including those with disabilities, they decided to move forward with districtwide implementation the following year.

A committee with representatives from the technology department (InfoTech), special education, general education, administration, and AT came together to develop an [updated technology plan](#). The committee worked together to map out the strategic plan, develop goals, and identify indicators of evidence to show progress toward goals. The plan was disseminated widely throughout the school district community and is tied into the work of the district at all levels—district administration, school administration, and teaching and learning—so that everyone shares the same priorities related to technology use. The district’s vision for technology placed accessibility and Universal Design for Learning (UDL) front and center, and articulated the belief that accessible technology tools could benefit many students throughout the district, in both general and special education. In addition, the district placed an emphasis on transparency, clear communication, collaboration, accountability, and inclusivity as part of their efforts to build a shared vision for technology that would be embraced by all members of the district community.



Lessons Learned

Recognizing the complexity of moving from a small-scale pilot to districtwide technology implementation, district leadership worked together to implement leadership practices that would help lay the foundation for success:

- **Specific goals for technology** were incorporated into the district strategic plan, as well as the school-level plans, to ensure that technology training was embedded into professional development as well as parent meetings, open houses, and personalized trainings.
- **Data points to measure success toward goals were identified as well as plans for collecting data** on requests for support, tool usage by school building, number of trainings conducted, the relationship between integration of tools and hours of professional development received, and connections between tool usage and student learning outcomes.
- **Informed by data collected**, the district made additional trainers available to expand capacity and developed on-demand technology support resources for district staff, students, and families as well as a dedicated help desk request form.

Throughout the process of planning and implementation, the district relied on [data to drive continuous improvement](#). Initial barriers identified through the pilot study were addressed during full implementation; data collected during full implementation were then used to identify additional needs and provide scaffolding for students. During the second year of districtwide implementation, staff observed more requests for support by students, parents, and teachers, which helped them pinpoint limitations with the tools. It emerged that additional resources were needed to provide broader access to auditory supports for print as well as other alternative formats. As a result, the district adapted specific questions for publishers developed by the Texas Assistive Technology Network for their procurement processes to ensure that all published materials purchased had accessible digital formats available.

How Leadership Team Practices Held Up in Remote Learning

“We had a lot of things going for us as March rolled around, really due to the unified thinking throughout the district that began a few years ago with the push toward UDL and accessible tools. It was really down to the collaboration between all the departments.”

– TISD leadership team

Like every school district around the country, a rapid shift to remote learning was not without challenges for Tomball educators. Though the district had done significant groundwork in technology implementation and addressing the needs of families, the reality of multiple children learning from home presented unexpected challenges. For example, the district quickly identified many families with multiple children needing technology access, parents working from home, and limited or no broadband access, and focused on the immediate need to distribute wireless hotspots and technology tools. An additional challenge emerged in providing supports for students with disabilities. Previous strong collaboration between AT and the InfoTech departments facilitated the process of coordinating inventory, getting materials checked out, and handling training, but distribution was complicated by teachers or parents being unfamiliar with the specific AT components often used by the AT department. For example, a teacher may request a switch for a student but not identify the necessary component parts (e.g., head mount, switch tools). The district noted the importance of collaboration and coordination between all parts of the district, including parents and families, in addressing these challenges. The work of Tomball prior to the pandemic in building those collaborative structures and a “unity of purpose” ensured that everyone worked together to come up with solutions.

Bright Spots: What Worked Well?

Tomball leaders noted that the previous hard work of the district to develop a strong strategic plan for technology helped them to respond to the rapid shift to remote learning. These efforts set the foundation for the planning process that resulted in the implementation of a new learning management system to support remote learning for the 2020–21 academic year. In particular, they cite the district’s shared vision, commitment to inclusion, collaboration between departments, and a culture of data use as critical supports.

Addressing the Needs of Students With IEPs

As the district shifted into remote learning, educators reviewed every IEP goal to determine which goals could be addressed remotely and which could not, to create multiple options for each student depending on whether they were able to receive in-person instruction or not. The district worked closely with parents to develop alternate plans and to be realistic and transparent about what could work in each learning environment. As part of this process, the district surveyed students and families to understand how many students were engaging, in which areas of online learning they were engaging, and which parts of the IEP were being implemented.

For IEP evaluations, the district employed a mindset of compassion first, avoiding rushing evaluations with incorrect methods or not enough data, which could lead to the wrong services or not enough services being provided for a child. In addition, the district made use of previous data collections and informal processes to ensure that services were provided for younger children who may not have had a formal evaluation yet but for whom information suggested they may need services.

Engaging With Families

District interviewees noted that school board and district meetings were very well attended and lasted well into the night as the district responded to every parent with a question or comment, and emphasized the district's goal of being student- and family-centered in their decision-making process. All interviewees spoke to the level of family and community involvement and collaboration as a positive element in the district's COVID response.

Resources

Tomball Strategic Plan

Tomball Strategic Technology Plan

2014–17 Technology Plan

Explore the other high-leverage leadership practices and read stories of how districts have used these practices to create and sustain inclusive technology ecosystems to improve outcomes for every learner.

- **Create a community-wide vision and aligned goals.**
- **Develop a strategic technology implementation plan.**
- **Measure progress for continuous improvement.**
- **Engage families in collaborative activities.**
- **Develop clear outcomes for professional learning.**
- **Take ownership of infrastructure development.**



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