

The following document outlines a research reflection on current needs related to facility and program outlined by GCASD elementary faculty and administration.

Structural Needs (Existing Facilities)

“Student achievement is often purely looked at from the perspective of the strength of the curriculum and the quality of the teachers. However, study after study demonstrates that facilities themselves have a huge impact on student behavior, grades, teacher tenure and even community satisfaction!

Unfortunately, school facilities and building equipment are in dire need of upgrades and repairs.



According to the [Center for Green Schools](#), \$542 Billion would be required over the next 10 years to modernize the nation’s K-12 public schools. How does this deferred maintenance affect students?

1) Student Behavior – studies show a relationship between the physical learning environment and student behavior. *Broken Window Theory* states that physical disorder, such as broken windows, run-down buildings, etc. leads to bad behavior and disorderly conduct. **School facilities that are not in great condition could be the cause of poor student behavior and conduct in the classroom.**

2) Student Achievement – facilities have the power to weaken or improve the teaching and learning environment. **Higher grades have been associated with the design and condition of school facilities.**

Studies in different geographic areas have even shown a link between facilities and teacher tenure. Teachers are more likely to stay in their job if the school is in good condition.

3) Health – the *Sick Building Syndrome* states that **acoustics, air quality, and temperature of facilities affect the stress levels and physical health of building occupants** - student and faculty health can be impacted by the physical facilities they are in. A common cause for *Sick Building Syndrome* is an issue with the HVAC system, such as mold, improper ventilation or lack of proper maintenance.

4) Community – aside from building occupants, the physical condition of K-12 facilities can also affect community members. **Housing prices change based on the quality and appearance of schools**, which

can in turn impact a school's incoming student population, the number of community events held in school facilities, community involvement with school activities, and more.

For Superintendents, Business Officers, Principals and other stakeholders, this is a big challenge. With budget cuts across the board, it's especially difficult to stay on top of deferred maintenance needs.” (Zippin, 2014)

HIGHLAND:

- Limited space to provide any programming beyond what is currently occurring. There is insufficient space to accommodate labs or small group instruction. Art occurs for 1st grade students in a space shared with the all-day Kindergarten students and music for 1st grade students occurs on the stage in the gym as the schedule permits.
- Safety – a secure entrance meeting today's standards is not available.
- Storage is not adequate in any space. Classrooms are overcrowded and instructional space is consumed with the supplies and materials needed to provide instruction.
- The computer lab is plagued with dripping tar when it rains, when snow melts or when there is a change in temperature.
- Foundation sinking- As you walk the hallway or in/out of the classrooms, a significant slope is evident.
- During the months of August, September, May & June, students may be faced with classroom temperatures upwards of 85 degrees. There is limited circulation and the direct sun only increases the intensity of the heat.
- Direct sun and windows that will open only a few inches, influence the climate of the library. This space often experiences temperatures that exceed the rest of the building. In addition, the stagnant air is oppressive.
- Due to age and the level of ongoing use, all restrooms are challenged with an odor of urine that has not been eliminated with ongoing cleaning.

HILLVIEW:

- There are constant water leaks in several classrooms and the gymnasium.
- Heating/Air Conditioning system has chronic concerns. Malfunctioning that results in water pouring into the classroom and the classroom below if applicable. Classroom temperatures range from 50 degrees to 85 degrees plus on any given day.
- Safety – a secure entrance meeting today's standard is not available.
- The carpet has been in place for over 30 years. It has been exposed to water, dirt and vomit. Our students sit on this floor daily.
- Due to moisture issues, each classroom positioned on the lower level has a dehumidifier draining into the classroom sinks. Without this intervention, the smell of moisture is overwhelming.
- Storage is needed in every area. Classrooms, communal spaces and even hallways are cluttered with supplies and materials.
- Limited space to provide any programming beyond what is currently occurring. There is no space to accommodate additional labs or small group instruction.
- Student coat closets and small group seating is found outside each classroom door.
- Student project storage is nonexistent.
- The elevator is inconsistent. There have been instances when our students with multi-disabilities need to be carried in order to transition between the levels of the building.
- In need of infrastructure to support our level of technology usage.
- There is harsh lighting without a method to adjust throughout the building.

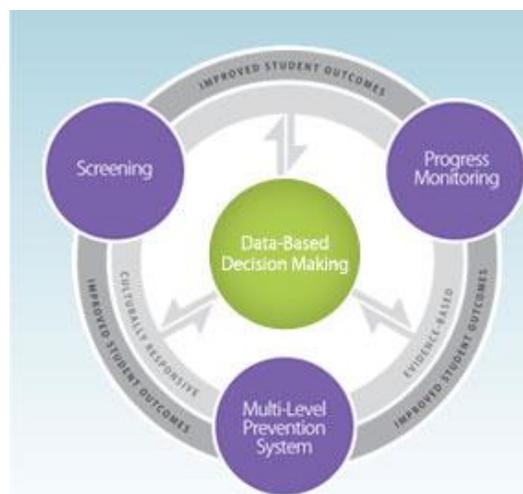
Instructional Needs (Current Programming)

RtII/MTSS:

Rigorous research clearly shows that implementing the four essential RtII (Response to Instruction and Intervention) components with fidelity is an effective strategy to improve schools and increase student learning. The four components provide a research-based framework for delivering high-quality instruction and interventions customized to individual student needs (Fuchs & Vaughn, 2012). Furthermore, teachers who use the components with fidelity will improve their instruction and close achievement gaps for students with identified needs in reading (Gersten et al., 2008) and mathematics (Gersten et al., 2009). RTII was codified into federal law as a method for learning disability identification through the reauthorization of the Individuals with Disabilities Education Improvement Act of 2004 and has since become a major presence in education reform (Fuchs & Vaughn, 2012).

MTSS (Multi-Tiered System of Support) is a framework to help all students reach high standards, such as the Pa Core Standards or other rigorous college and career readiness standards. MTSS creates opportunities for students to access college- and career-ready instruction through varying tiers of intervention matched to individual students' needs. Instruction within tiers features increasingly intensive evidence-based academic, social-emotional, and behavioral practices. MTSS is also comprehensive framework for continuous school improvement that uses ongoing measurement, monitoring, and evaluation of standards implementation and outcomes to drive data-based decision-making. Sustainable MTSS is characterized by a continuum of resources that support the effectiveness of practitioners within a dynamic and collaborative problem-solving process. MTSS provides a framework for how students receive instruction that allows them to develop the skills necessary to succeed in school and life (American Institute for Research, 2015).

The K-5 Elementary Program has fully embraced the RtII/MTSS approach to intervention and supporting learning for all students. We recently participated in the first meeting with representatives from PATTAN to be considered as an RTII/MTSS school. Our next step will be to submit our application to the Pennsylvania Department of Education and will then wait to hear in March if we will indeed be identified as a school meeting all needed requirements.



MTSS/RtII encompass best practices that we are proud to embrace. The adoption of this methodology requires the constant monitoring of student performance. Data teams gather to review progress and adjust interventions as needed. In addition, the delivery of these interventions in small groups requires space. Presently, the groups at Highland and Hillview are as follows:

GRADE LEVEL	SUBJECT/TIER	NUMBER OF STUDENTS BEING SERVED AT THE IDENTIFIED LEVEL
KINDERGARTEN	Reading Tier II	20
	Reading Tier III	27
	Math Tier II	2
	Math Tier III	7
GRADE 1	Reading Tier II	26
	Reading Tier III	7
	Math Tier II	19
	Math Tier III	5
GRADE 2	Reading Tier II	25
	Reading Tier III	11
	Math Tier II	22
	Math Tier III	6
GRADE 3	Reading Tier II	23
	Reading Tier III	10
	Math Tier II	15
	Math Tier III	25
GRADE 4	Reading Tier II	19
	Reading Tier III	11
	Math Tier II	13
	Math Tier III	19
GRADE 5	Reading Tier II	12
	Reading Tier III	16
	Math Tier II	10
	Math Tier III	7

Intervention time is scheduled by grade level. Each grade level provides intervention at a different time to maximize the available resources to deliver the researched supported interventions. Each tier at each grade level has multiple groups meeting simultaneously. This level of intervention requires a quiet space to deliver the instruction. Presently, at both schools, groups meet in any available space that can be located. This often means meeting in the hallway. The hallway is not ideal for many reasons; noise and distractibility are at the top of the list.

STUDENT ENGAGEMENT/STEAM:

The goal of integrating a project-based focus is intellectual student engagement with the development of 21st Century Learning Skills. This approach requires lab space as well as space for project storage. Instruction no longer occurs in straight rows with all students sitting for extended intervals of time. Students need space to move and collaborate.

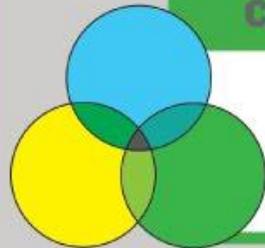
21st Century Skills

Metro 4Cs Rubric Performance Areas



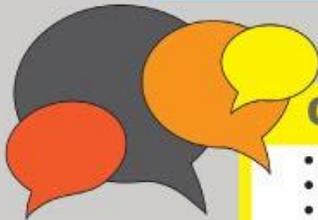
Critical Thinking

- Information & Discovery
- Interpretation & Analysis
- Reasoning
- Constructing Arguments
- Problem Solving
- Systems Thinking



Collaboration

- Leadership & Initiative
- Cooperation
- Flexibility
- Responsibility & Productivity
- Collaborate Using Digital Media
- Responsiveness & Constructive Feedback

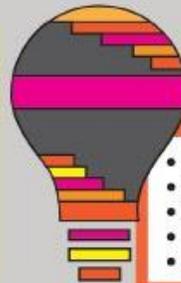


Communication

- Effective Listening
- Delivering Oral Presentations
- Communicate Using Digital Media
- Engaging in Conversations & Discussions
- Communicating in Diverse Environments

Writing to:

- Inform
- Support an Argument With Claims
- Engage and Entertain



Creativity

- Idea Generation
- Idea Design & Refinement
- Openness & Courage to Explore
- Work Creatively with Others
- Creative Production & Innovation

ITINERANT SERVICES:

It is the goal of the K-5 program to provide a continuum of support services to meet the individual learning, social, and behavioral needs of all students. Presently, GCASD supports students identified with autism, multi-disabilities, intellectual disabilities, learning disabilities, emotional disabilities as well as the support services of speech, occupational therapy, physical therapy, vision therapy and hearing support. Each of these services require space to provide the students with the supports and therapies that are needed. Private duty or Personal Care nurses are currently needed for several of our students. Often these services occur in shared spaces that are less than adequate for the required interventions.

In addition, many of our students with attention, social and behavioral needs are supported through a TSS (Therapeutic Support Staff). These individuals spend the school day supporting the student one-on-one. Some classrooms may host 2-3 TSS workers at one time. Space is needed to accommodate the additional adult personnel.

Instructional needs (Future Projections)

ALL DAY KINDERGARTEN:

We currently deliver Kindergarten in ½ day increments. The length of the ½ day provides enough time for the teaching of reading and mathematics. It is the recommendation of the administration that School Board Directors consider transitioning to a model that provides all day learning for all Kindergarten students. An all-day delivery model would lend itself to the integration of right brain courses such as art and music. This would appear to be a more balanced delivery model. In order for this to occur, the School Board will need to consider action for the schedule change and the allocation of space and resources.

PRE-K PROGRAMMING:

“Research shows that young children’s earliest learning experiences can have powerful long-term effects on their cognitive and emotional development, school achievement, and later life outcomes. Decades of research in brain development and cognitive science have shown that young children are constantly learning and are capable of learning much more than previously believed.

Unfortunately, research also shows that many American preschoolers do not have access to high-quality early-learning opportunities, that there are significant disparities in children’s early-learning experiences, and that these disparities result in large achievement gaps even before children enter school.

Pre-kindergarten programs that provide high-quality early-learning experiences for young children, followed by full-day kindergarten and other elementary reforms that sustain early learning gains, are a critical tool for improving student achievement and narrowing achievement gaps.” (Mead, 2012)

Space to provide quality programming is needed. This space could be occupied with school district designed programming or that of a partnering agency.

STEAM:

As mentioned in a prior section, intellectual student engagement is at the forefront of planning for educational development. As we begin to shift our approach and the thinking of students, we may not experience an immediate need for space and equipment. As our students become fully engaged and competent in project/problem based learning, the demand will increase. Our design planning should not limit the growth capacity of teaching and learning. Students often surpass the developed expectations when given adequate space, time and resources.

OTHER:

Changes occur so quickly to the demands and requirements of education. The needs of today will not be the needs of tomorrow. Flexibility in design and shared space is needed to prepare for the unknown that will be faced in years to come.