

Shared Vision and Rationale

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Spring 2019

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Vision Statement

As described by Whitehead Road Elementary School's Growth plan for the 2018-2020 years, our vision is to build a culture of high expectations and equity where students can grow academically and socially to improve our community and world. This vision targets goals for literacy, mathematics and social-emotional learning. The vision supports technology integration specifically in the area of mathematics, through the use of individualized, goal-oriented math support and extension for each student. Through the use of technology, we can ensure students receive equitable math instruction by using their MAP Skills assessment data to leverage an independent math component, Khan Academy. Khan Academy will increase student learning objectives through an individualized math plan, that encompasses the student taking ownership of tracking their progression in their understanding of math concepts. In addition, teachers will target math content standards in a small group setting to ensure equitable learning opportunities and instruction at each students level. This will increase engagement, goal setting, and individualized learning to promote academic achievement and social-emotional learning through the use of individualized learning and student accountability.

Rationale

This shared vision was developed with intent to target math instruction and assessment data that has been collected in the 2018-19 school year. Parties conclude that math instruction is an ideal area to incorporate technology integration to support the diverse learning needs of the students at Whitehead Road Elementary. The survey was given to key stakeholders; teachers, administrators and support staff. The results provided feedback that granted approval and acknowledgement of the need for integration of technology in the subject of math to promote

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differentiation and skill based groups that could challenge students at their individual learning levels. According to this feedback, teachers especially show interest in utilizing Khan Academy to support their math learners. To ensure buy in and teacher likelihood of investing in the time to learn about a new technology tool to enhance and engage their learners, Khan Academy will utilize assessment data to provide individual support for math learners. According to ISTE (2019), “All stakeholders provide input for the vision and understand how it impacts them and how to apply it within their individual roles”. Teacher, staff and administrative input was very important in deciding the what for this shared vision at Whitehead Road Elementary.

When considering this particular technology approach, student achievement was top priority. Pearson (2007) concludes, “Technology helps change the student/teacher roles and relationships: students take responsibility for their learning outcomes, while teachers become guides and facilitators”. In addition to Khan Academy, teachers are encouraged to create small group instruction models in their individual classrooms to support this technology integration and individualized learning approach to math instruction. This means teachers will collaborate to design classrooms that integrate a technology station to engage learners at their individual level. Teachers can then leverage assessment data to drive small group instruction for various and diverse learners. “Technology lends itself as the multidimensional tool that assists that process” (Pearson, 2007). Technology will enable specific skill building for students, while teachers facilitate meaningful instruction based on the data collection during individualized learning time. Using this tool will give teachers the data they need to plan and implement effective instruction that meets each students diverse learning needs, while enabling students to become self sufficient as well. Ribble (2017) suggests, “Learners must be taught how to learn in a digital society. In

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other words, learners must be taught to learn anything, anytime, anywhere”. This means students must be exposed the various forms of technology, but need time to develop the skill of using diverse tools to enhance their own learning in various subjects. Math is difficult for some students. Giving them the opportunity to dive into the math curriculum with the support of digital access and resources will create opportunities for achievement and growth in the area of math. Sheninger (2014) writes, “It is a common misconception that today’s learners can seamlessly transition from the routine use of devices for personal reasons to using them for learning, research and enhanced productivity” (pg. 158). The goal is to utilize Khan Academy as the catalyst for the start to our technology integration shared vision to support individualized math instruction.

According to one study, when looking at math achievement seven of eleven studies showed positive results on test scores in elementary and secondary students achievement in the subject of math. Three math achievement scenarios resulted in little effects in technology enhanced math instruction. (ISTE, 2008). This shows promise in the use of technology in math instruction. In this same study, the scores did not show the use of technology versus the use of no technology, but rather the software that was being used in the classrooms. Furthermore, the study concludes:

The research findings described in this section clearly demonstrate that the use of education technology in teaching and learning is having a strong, positive effect on student achievement. And while standardized test scores continue to be the measurement du jour, the use of technology is having an equally positive impact in helping students

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gain necessary 21st century skills that serve to advance learning engagement, and prepare students for life and work (ISTE, 2008).

Even when test scores do not necessarily reflect these positive outcomes, the use of technology enhances students ability to function when they enter their careers and start their college careers. Students need to be exposed to technology integration in various ways to influence advanced skills they will need in their future. This study also concluded there are several factors that influence the ability of technology integration and tools to be successful. ISTE (2008) insists teacher training, teacher application must align to current curriculum standards, the technology is used daily, the technology tools must provide individualized feedback and must be tailored to individual students needs, the technology needs to be collaborative in nature, project based learning and real life scenarios must be reflected and last, all stakeholders must model technology integration appropriately in order for technology integration to be successful. In this shared vision, technology will utilize individualized learning plans and goals for students, be collaborative math groups and Khan Academy will be used daily during math stations to promote consistency and routine operations with the technology tool itself.

In another study, Zengin (2017) concluded Khan Academy was successful when used with the flipped classroom model approach. Students in this study found that math skills were easier because they were exposed to various visuals and representations of the math. This made it easier to retain the math skills and concepts before they came to class (p. 94). Through this study, we see that the visuals and experience students gain from seeing math content in versatile ways can have positive effects on their retention of math skills and concepts. In this same study, 25% of students stated that using Khan Academy in the flipped classroom approach enabled them to

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enjoy the subject more than they would have in a standard math course. Students also felt that they learned the material not through memorization but conceptually (Zengin, 2017, p. 95-96). This provides evidence that some students may walk away with an informing experience that will provide an opportunity for them to enjoy the math concepts they are learning in conjunction with their small group instruction in teacher led groups. The learning is more conceptual and not rote memorization. Math concepts at their core are intense and dynamic. Students need to have a conceptual understanding before they move to the next stage in their mathematical journey. Through the use of Khan Academy in math instruction, students will walk away with a more sound understanding they need to compete in our global economy.

Diversity Considerations

Whitehead Road is a title 1 school with 100% students eligible for free and reduced lunch due to such a high percentage of poverty in the district. There are eight hundred and eighty five students enrolled this current year. Whitehead serves a diverse population of learners from various backgrounds and learning abilities. There are 39% African American, 3% Asian, 39% Hispanic, 15% Caucasian and 4% identify as two or more races. Of these diverse learners, 9% are students with disabilities (SWD), 24% are English language learners (ELL), 8% are gifted, and 55% qualify for remedial education programs (EIPS support).

Whitehead Road is one-to-one and there are technology support staff to help resolve any computer issues on site. Students will have equitable access to Khan Academy during class time, but the concern will be students having the ability to access the curriculum at home. After speaking with a key stakeholder, one of the Assistant Principals, we discussed having an area students can go in the morning to work on their math assignments. The district offers hotspots

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for students who do not have internet access, but there are difficulties with this support as well.

To encourage use and practice with math skills, students may practice in the morning in a quiet environment dedicated for Khan Academy assignments. This would be in a room right outside the cafeteria and would enable students to arrive, eat their breakfast and work on assignments they were to complete during class or for homework. This will ensure students that do not have internet access at home can utilize this technology tool in an equitable learning environment.

This choice also provides students with an opportunity to engage in their learning freely in their own time. One staff member will be required to arrive early to support this choice for students.

Another diversity issue is the ability for students with limited English proficiency may encounter problems with how to navigate Khan Academy effectively. In one study referenced above, Zengin (2017) found students had difficulty navigating simply because they did not understand the program (p. 96). In order to provide equal opportunities for students who may lack the basic skills needed to navigate Khan Academy, there will be a teacher, parent and student workshop before the implementation. This training will be provided by a group of teachers in the building that are familiar with Khan Academy. One or more of the teachers will need to be able to translate for parents with limited English proficiency. New students will also be asked to train with a support teacher to ensure they understand how to navigate and use the site effectively to ensure equitable opportunity with this technology integration vision for individualized math support.

One last support will be for teachers who are expected to implement this shared vision. ISTE (2008) states, one of the key factors for successful technology integration is teacher training that is ongoing. “The use of technology for learning does not take place in a vacuum;

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practitioners must effectively apply technology in the curriculum and throughout the school day. Further, access to technology professional development must be consistent and ongoing in order to keep teachers up-to-date with changing programs, resources, and applications”. Teachers must be trained not only on how to effectively utilize and navigate Khan Academy but how to access math data to use to support individualized math support with this particular program. Teachers will need to know how to input their students data to target their needs and also how to assign and use the technology application with fidelity. These trainings will need to be systematic and documented in the School Growth Plan to support professional learning goals for the school in order to reflect student growth in the are of mathematics. Peer coaching and open discussions during collaborative planning will also positively impact this technology initiative. Team leaders will need to put Khan Academy exploration activities in their monthly agendas. This will encourage collaboration and communication about this tool among grade level teams.

Stakeholder Roles

Administrators have a huge role in this technology initiative. They must communicate expectations to teachers during a staff meeting or professional learning in order to prepare teachers and support staff for the technology integration plan. The goal will be to lay out the vision and state its goals. Providing time for teachers to digest and explore this resource independently will help promote likelihood of teacher buy in and acceptance. The principal will be the one to state the goals of this initiative. Once the plan is in place, the assistant principals will share the responsibility of running the morning session for Khan Academy work time for students and talking with teachers during collaborative planning about this tool. Ultimately, the time frame for these tasks are spaced out. Referencing this academic year for example, digestive

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time would be the remaining of the academic school year (two months), preparation for roll out (summerime) and beginning implementation in late August, late September. Administrators will work closely with the Instructional Coach to follow up with the nest steps in implementation and help with planning teacher professional learning and support workshops for parents.

The Instructional Coach will be responsible for modeling how to use the assessment data to set up students accounts on Khan Academy under their teachers account. This process will also take time and preparation. The Instructional coach could begin creating logins for teachers and updating student data to the site. This would enable teachers and students to easily access the instructional tool with very little hassle. The Instructional coach will need to host planing for this initiative and work to find one representative from each grade level to facilitate Khan Academy discussions at each grade level. Each grade level representative would be required to meet with the instructional coach, or at bare minimum be required to communicate the teams standing with the technology tool to support math instruction. The Instructional Coach will work to communicate with teachers and even students during this initiative.

Teachers, especially team leaders will be expected to keep up with the initiative and track how they will use this in their math instruction. There will be lots of follow up with the Assistant Principals and Instructional Coach. Once the initiative gets going, teachers will be required to utilize the tool in their classroom to support learners and their achievement. There will also be trainings that teachers would have to attend to ensure students receive equitable access to the program, a list of students who may need to attend sessions for more clarification on navigating the site and ensure parent contact is made. Teachers will also be encouraged to volunteer and support parents in this journey. There will be sessions for parents to ensure equitable access to

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this technology tool. Teachers will be the liaison between administrators/coach and parents/teachers. Their role is to communicate with the proper key stakeholder depending on the situation or scenario. Teachers will carry much responsibility of this initiative by routinely utilizing this technology tool to enhance student understanding of the math content and structure their classroom environments to support this journey.

Parents will need to attend Khan Academy sessions to ensure they are aware of the expectations their child has with this tool. The sessions will be tailored to their questions and concerns with intention on supporting them faithfully during the implementation process.

Students will need to have an open mind and be willing to put in the effort to grow in their math skills. Students who do not have internet access at home will be responsible for attending the morning sessions for Khan Academy practice to complete class or homework assignments while they eat their breakfast and wait for school to start.

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Appendix

01. How would you describe a classroom/lesson that effectively integrates technology?

- a. Students are engaged with an activity on their devices.
- b. Students and teachers are engaged with an activity on their devices.
- c. Devices are used to support teachers and students with learning objectives/standards.
- d. Technology is used to support a learning activity that could not be completed on paper or other physical form.

02. What, if anything, would you like to see teachers/students doing differently so that technology is integrated more effectively?

- a. Teachers could use more training in this area.
- b. Teachers could be using devices in diverse ways to encourage engagement among students in various groups or various activities in their classrooms.
- c. Students should be using BYOD opportunities to learn how to use technology ethically and responsibly.
- d. Other, please explain.

03. What would you change, if anything, about our current professional learning so that it would better help you to integrate technology?

- a. Teachers would get more training in new and innovative technologies that teachers are using across the country.
- b. Teachers will receive training on how to use the essentials and then build from there.

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- c. Teachers should not be focused on technology during professional learning unless it is proven to be effective use of time.
- d. Teachers should receive training on ways to engage students using technology and not necessarily just new tools and resources.

04. What do you believe is the role of our stakeholders as we move forward with our technology integration vision?

- a. Stakeholder need to be aware of the time and support it takes to utilize new technology.
- b. Stakeholders should help evaluate new resources for teachers.
- c. Stakeholders should continue to push out new tools and resources, but not enforce specific use of technology unless a teacher is interested.
- d. Stakeholders should ensure teachers are trained in technology integration throughout the school year to ensure effective use.

05. What subject area do you believe technology integration would support your learners most? Explain.**06. Can explain what the shared vision is for technology integration.****07. Name a few ways to engage learners in a classroom setting?****08. In what ways do you think technology can engage a learner in your classroom?****09. Which technology tool/app do you feel most comfortable integrating to support assessment data at this time?**

- a. Seesaw
- b. Khan Academy

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c. Storybird

d. Pear Deck

10. Do all students have equitable access to technology in your classroom?

1- Strongly Agree, 2 - Agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree

11. There any ways to improve equitable access to technology at your school?

1- Strongly Agree, 2 - Agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree

12. There are opportunities do your students have to engage in personalized learning in your classroom?

1- Strongly Agree, 2 - Agree, 3- Neutral, 4- Disagree, 5- Strongly Disagree

13. How would you rate technology integration at your school?

1, 2, 3, 4, 5, 6, 7, 8, 9, 10