Teaching and Reaching with Technology

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**Vision Statement**

Stakeholders at Wayne County High School will share a vision of a digital learning environment that will meet the needs of all 21st-century learners; the International Society of Technology Education (ISTE) will help guide the rationale, considerations, and leadership roles of this plan. Collaborative working environments for both teachers and students will occur to ensure students are being prepared for real-world experiences involving technology. Teachers will continuously seek and gain knowledge of research-based instructional strategies, ways to seamlessly embed technology within their disciplines and grade levels, and make sure each classroom is student-centered and technology-enriched. Ongoing, up-to-date, and unceasing professional development will take place throughout the school year, with a common goal of making every classroom a productive and fun learning environment for all students. ISTE (2015) supports collaborative initiatives by stating, “Having a shared vision for technology use is important because it sets a direction for technology coaching efforts and ensures that educators, students, parents, and community stakeholders agree on accomplishing the same goals that support the vision” (p. 17).

**Rationale**

The world of education is constantly changing and teachers must reinvent their instruction to reach ever-changing, student-achievement goals. In fact, the only constant in education today is change and we must embrace the revolutions we experience as educators. Zepeda (2012) stated, “School improvement is a type of purposeful change, and successful school improvement is dependent upon the school’s ability to manage change and development” (p. 278). Kao (2014) also supports positive change by stating, “Since the pressure of educational reform is constantly increasing, as in-class executors, teachers need to enhance their independence and professional capabilities in order to perform their job with the greatest efficiency” (p. 302). Change is inevitable and must be promoted in a positive way for teachers to be receptive. Wayne County High School will use a shared vision to help create and promote positive changes involving technology throughout our school and system.

In July 2016, a selection of Wayne County High School teachers were given a survey to determine their assessment and thoughts on the uses of technology throughout their school building. Because many teachers were on vacation, many of the completed surveys came from a variety of grade level and subject teachers who taught summer school or who happened to check their email in order to take the survey during summer hours. A total of 18 teachers took the survey, from all grade levels and disciplines. The purpose of the survey was to gain a clear understanding of where teachers feel their school and District are in the implementation of technology use within their school and to identify strengths and weaknesses of their use of technology. All of the questions asked in the survey were aligned with the ISTE’s Essential Conditions, which provide a “researched-backed framework to guide implementation of the ISTE Standards, tech planning, and system-wide change” (ISTE, 2016).

The first ten questions were statements, where teachers could strongly agree, agree, disagree, and strongly disagree. The results to these questions are in Table 1.1 in the Appendix below. I do believe some of the results could possibly be different with a large amount of teachers taking the survey; however, I do believe these answers align with what they believe as teachers. From the results, I noticed professional development is definitely a need within the school. Because technology is constantly changing, teachers need the professional development to keep them up with the technology they are using in their classrooms. The ISTE Policy Brief mentions reliable and regular professional development as vital in a teacher’s learning by stating, “Access to technology professional development must be consistent and ongoing in order to keep teachers up-to-date with changing programs, resources, and applications” (p. 7). There are also needs to increase community involvement and teacher knowledge and comfortableness in the area of technology.

There were three short-answer items on the survey, which are listed in the Appendix. For the short-answer questions, I received a variety of answers. Most teachers felt as though device-use was a need for professional development (short-throw projectors and the programs to go with those). Johnson (2016) noted the importance of making sure professional development is “relevant, interactive, delivered by someone who understands their experience, sustained over time, and professional.”

Teachers also wanted specific ways, tailored to their instruction, to use technology as learning tools in their classroom during instruction, for practice, and for productivity. I find this interesting and supportive of using relevant professional development to teach teachers how to use technology as a part of their instructional delivery, student learning, and productivity for both teachers and students. Teachers need to witness lessons that include technological support of researched-based strategies. Brabec, Fisher, and Pitler (2004) support this concept by stating, “Lesson planning should focus on content and classroom strategies, then on ways in which technologies can enhance the lesson” (p. 11). Researched-based strategies such as notetaking, identifying similarities and differences, cooperative learning, practice, and feedback can all be supported by the use of technology. Using word processors, web resources, organizational software, data-collection tools, multimedia applications, and non-multimedia applications can support and enhance those research-based instructional strategies in all classrooms. The survey results also discovered that many students are interested in receiving knowledge in areas such as video production and game design, as noted in a recent survey given to students who are attending summer school. Students need exposure to the different types of technology available to them, in addition to learning about tools for presentations and other uses.

When I asked teachers to list some ways digital equity could be provided to all students, there were several suggestions listed. Opening a computer lab before and after school to ensure all students have the opportunity to use devices and Internet services for projects and learning was an idea. BYOD was also an idea, which would allow for students without devices to use what we have at school (which would bring the school closer to a 1:1 initiative). Another idea was to allow a speaker to come during summer school to discuss different careers in technology. A technology club was also mentioned to add to the array of after-school activities. I think these suggestions are great; however, I do feel as though we can dig deeper to find some resources to help increase an awareness of different ways to reach a school that is more digital equitable than it has been in the past.

**Diversity Considerations**

All children, in all schools, deserve the right to receive digital equity. Our world has faced extreme technological advancements throughout the years; however, not everyone has been able to experience those developments due to the digital divide some of us may face. For school systems, such as Wayne County, a plan for outreach must take place to ensure our students have access to up-to-date devices as well as Internet services. Just as Katz and Levine (2015) promote the creation of digital equity in all communities, WCHS plans to do the same. We will begin by gaining facts through a digital inventory, to learn learn more about digital resources and availabilities within the homes of students in our school and community. Katz and Levine (2015) support digital learning inventories discussing of using a digital learning inventory to determine deficits and strengths set forth in schools and communities (p. 22). A digital inventory will also help to identify specific needs for subgroups, such as females, special education and gifted students, and those who live in areas and homes with low socio-economies.

Building knowledge throughout the community and in schools about the use of media in professional practices and learning ways to empower digital equity throughout the community and in homes is going to be a large part in creating a more technologically-sound environment for all of the students in our system. Possibilities such as creating a community learning center with digital access, opening up WCHS during non-school hours for digital access, offering after-school technology clubs for both student and parent involvement, and increasing awareness of facts and solutions through research and dissemination will be considered by a committee of stakeholders to help close the digital divide in Wayne County.

The digital divide affects students of various backgrounds; however, it also affects teachers. Professional development for using technologies within everyday lessons is essential to help close the gap for those who are more comfortable with traditional teaching approaches. Just as we are expected to do within the walls of our classrooms, differentiated instruction should take place during PD opportunities to help alleviate the stress, confusion, and sometimes embarrassment of teachers not knowing how to use technology in their classrooms. Support from stakeholders and technology coaches will be essential during this process.

**Stakeholder Roles**

Clearly defined roles that are equally distributed are important when creating a plan of action of any kind. Owen (2014) supports the idea of disseminated leadership by stating, “Leadership support and opportunity for distributed leadership within teams are additional characteristics of many PLC models” (p. 55). Administrators, technology leaders, teachers, parents, students, and community members will work together to increase technology use within the Wayne County High School building and within the homes of students.

**Administrators**

Administrators will learn teacher needs in the area of technology, promote a positive and collaborative work environment, provide professional development opportunities for optimal growth to take place, evaluate the use of technology throughout the school building, and continuously revise the technology plan as improvements are made and new weaknesses are identified. Administrators will also learn the talents and skillsets of teachers throughout the building and build a team of technology leaders, led by the technology coach, to reach professional development goals and support throughout the school. Community and parental reach-out will also occur from administration to help involvement take place in Wayne County.

**Technology Leaders**

A group of technology leaders will collaborate and create professional development opportunities to help meet the needs of teachers in the area of technology throughout the school building, in which the technology coach will lead. The professional development will be tailored to meet individual, small group, and whole group needs. Implementation may include topics that are geared toward certain subjects, grade levels, types of devices and how to use them, etc. A technology-needs survey will be distributed to identify the areas of professional development of technology that need to be taught. If there’s no one on the committee who specializes in the area of need, the technology coach will find someone in the community who can meet the need for the teachers. Promoting collaboration throughout the building will help create a positive learning environment. Collaboration was also brought to my attention as an important key when creating and designing professional development. When learning about the school’s teachers, a principal can also set up collaborative teams within a school based on the demographic profile of the teachers. Zepeda (2015) supports the idea of collaboration by stating, “Although adults can learn ‘on their own,’ learning in the company of others is a major component of professional development that supports adults” (page 19).

**Teachers**

Teachers will include researched-based strategies involving technology in daily lesson plans, work collaboratively with others during professional development, constantly evaluate the use of technology within their instructional practices, and reach out for help when needed for implementation, improvements, or questions. Teachers will also learn the technological needs of all of their learners, including digital equity, and collaborate with others, including technology coaches, to achieve a common goal of fulfilling those needs. Digital citizenship should also be modeled, respected, encouraged, and taught in all classrooms. Other types of roles may include leadership for technology clubs or increasing parent awareness about how teachers are using technology within the walls of their classrooms. During on-going professional development, teachers will increase their knowledge and skills by learning different ways to implement technology in their daily lesson plans to positively affect student learning. Technology implementation should be evident during observations by administrators and other teachers.

**Parents**

Parents will be informed of the new, innovative shared vision involving technology and will be asked to contribute their opinions and knowledge to the vision. Parents will be invited to share their ideas during School Council, PTO meetings, and teacher conferences. Wayne County will create an open-door policy for parents to express their concerns, suggestions, and comments pertaining to technology and the education of their children to administrators, technology leaders, and teachers. A small committee may be created in order for parents to discuss different possibilities and ways to help increase community involvement to help close the digital divide for various groups of students, parents, and teachers as well. If parents are deemed knowledgeable in certain areas of technology, they may be asked to participate in providing professional development to teachers as well.

**Students**

Students will be responsible for displaying digital citizenship through technology experiences as well as using technology in positive ways to influence and shape their educational experience. Students will be expected to use and take care of the technology in the school building and share their ideas with others about ways to use technology for academic purposes. If a student has trouble using a device, he or she is responsible for reporting the problems or issues to the teacher for further review and improvements to take place. Various projects created to show learning has taken place should incorporate technology and 21st-century skills and products should be the result in doing so.

**Community Members and Others**

Community members and others involved in the implementation of technology at Wayne County High School should promote and display technology as a positive addition to all children’s educational experiences. Technology should be presented as a progressive and constructive use of skills and time by students and others involved.

**References**

Brabec, K. Fisher, K. and Pitler, H. (2004). Building better instruction: How technology supports nine research-proven instruction strategies. *Learning and Leading with Technology, 31*(5), 6-11. Retrieved from <http://files.eric.ed.gov/fulltext/EJ695741.pdf>.

International Society for Technology in Education Essential Conditions (2016). Retrieved from <http://www.iste.org/standards/tools-resources/essential-conditions>.

International Society for Technology in Education Policy Brief (2016). Retrieved from <http://www.k12hsn.org/files/research/Technology/ISTE_policy_brief_student_achievement.pdf>.

Johnson, K. (2016). Five things teachers want from PD, and how coaching and collaboration can deliver them – if implementation improves. *EdSurge*. Retrieved from [www.edsurge.com](http://www.edsurge.com).

Kao, C., Tsai, C., & Shih, M. (2014). Development of a survey to measure self-efficacy and attitudes toward web-based professional development among elementary school teachers. *Journal of Educational Technology & Society*, *17*(4), 302-315. Retrieved from <http://www.ifets.info/journals/17_4/21.pdf>.

Katz, V. and Levine, M. (2015). Connecting to learn: Promoting digital equity for America’s Hispanic families. *The Families and Media Project, The Joan Ganz Cooney Center at Sesame Workshop,* 1-28.

Owens, S. (2014). Teacher professional learning communities: Going beyond contrived collegiality toward challenging debate and collegial learning and professional growth. *Australian Journal of Adult Learning, 54*(2), 54-77. Retrieved from <http://eds.a.ebscohost.com/eds>.

Visionary Leadership, Standard One (2015). Effective digital learning environments. *International Society for Technology in Education, Chapter 1,* 16-34. Retrieved from <http://www.iste.org>.

Zepeda, S.J., (2012). *Professional development: What works* (2nd ed.). New York, NY: Routledge.

Zepeda, S.J., (2015). *Job-embedded professional development: Support, collaboration, and learning in schools.* New York, NY: Routledge.

**Appendix**

Table 1.1

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| --- | --- | --- | --- | --- |
| Statement | Strongly Agree | Agree | Disagree | Strongly Disagree |
| 1. There is a shared vision among our District for implementing technology for our entire school system; an implementation plan has been written and is in place. | 89% | 11% | 0% | 0% |
| 1. Our school has access to current technologies and software. | 94% | 6% | 0% | 0% |
| 1. I feel highly skilled and comfortable with the use of technology during instruction. | 78% | 16% | 6% | 0% |
| 1. Professional development opportunities are readily available for all technologies used in our school. | 11% | 56% | 33% | 0% |
| 1. The school provides technical assistance when needed for maintaining and using technology. | 89% | 11% | 0% | 0% |
| 1. I am knowledgeable in using technology for the subject and grade level for which I teach. | 78% | 16% | 6% | 0% |
| 1. Students are the center of my instruction, as I facilitate students using technology-based resources. | 100% | 0% | 0% | 0% |
| 1. As a teacher, I continuously assess the effectiveness of the technology I use in my classroom. | 94% | 6% | 0% | 0% |
| 1. Community members are involved with effective technology use for learning. | 78% | 6% | 16% | 0% |
| 1. There are policies within the school and District that support technology for teachers and students. | 94% | 6% | 0% | 0% |

Short Answer Questions:

1. What are areas in technology (access, instruction, use of devices, etc.) do you feel our school could improve?
2. What technology topics would you like to see offered through professional development for the upcoming school year?
3. As a school, what are some ways we could provide digital equity to all students