A Philosophy of Instructional Technology

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The field of education is continuing to grow and become more complex. There are several reasons for this, not the least of which is the complexity of the students and the ways in which they learn. As society continues to change and grow, the way students learn is also continuing to change. Educators must stay with the times and find ways to reach the most students and be willing to stretch themselves in order to make that happen. Perhaps the biggest change within the average classroom over the last couple of decades has been with the integration of technology. John Dewey said, "If we teach today as we taught yesterday, we rob our children of tomorrow" (Richardson, 2008). Children learn in a variety of ways and using technology is something that every educator needs to be able to use to reach the most students. Without the use of technology in the classroom, an educator risks losing educational opportunities, and also risks losing the interest and engagement of the students. For this reason, the paper will show the following four points.

1. A clearly developed philosophy of instructional technology use in the classroom and as a technology leader.
2. Integration of TPACK concept into philosophy.
3. A clear understanding of use and importance of 21st century tools for 21st century learners.
4. A demonstration of thoughtful understanding of social, ethical technology use.

1. A clearly developed philosophy of instructional technology use in the classroom and as a technology leader.

As opposed to the classrooms of twenty years ago, exclusive use of a chalk or dry erase board as teaching tools is no longer acceptable for today's students. Students today are already using multiple forms of technology for their personal home use including the internet, cell phones, lap top computers, etc. Understanding the impact of technology on the practices and knowledge of a certain discipline is critical to using and creating technology tools in an educational setting (Koehler & Mishra, 2008). Educators that do not feel it necessary to bring in the use of technology tools to their classroom are greatly limiting their students. Resources that are available from today's technology are so vast that it is simply not possible to have as many without it. Saving instructional time is another valuable and important aspect to the use of technology. Maybe most importantly, to limit the use of the technology in the classroom risks the creation of a gap between what students learn and the skills they need for future careers.

All of this being said, there is a danger in using technology in the classroom simply for the sake of using more technology. The focus needs to remain in finding the most beneficial ways to help the students to learn. If the use of technology turns out to be the most beneficial way to student growth, then it should be available to use. If there is some other way that is determined to be more beneficial, then the use of technology should be bypassed. Student learning and growth can be brought about in a variety of ways, technology is just one of the options.

2. Integration of TPACK concept into philosophy.

TPACK is a frame work for teachers' knowledge on integration of technology (Koehler & Mishra, 2008, p. 3). It also introduces the relationships between all basic areas of knowledge including technology, pedagogy, and content (Schmidt, Baran, Thompson, Mishra, Koehler, & Shin). In order to for an educator to be effective, they must have a deep understanding of all three of these items. The TPACK model frames how they can be blended together to be most effective to the most students.

If it is an educator's goal to help their students reach their greatest potential within a certain subject area, using the TPACK model certainly helps that goal become more attainable. The TPACK model also shows that regular use of technology within the classroom to the point to which it is the norm helps to make it an effective tool, rather than using technology as a separate event within itself (Abbey). It must be a part of the educator's study and preparation of content and pedagogy as well.

3. A clear understanding of use and importance of 21st century tools for 21st century learners.

The 21st century skills of critical thinking, communication, collaboration, initiative, creativity, adaptability, and data analysis are timeless qualities that help students no matter the situation or the changing times (Abbey). The 21st century is a time of rapid change, and while the brain my not be changing, the tools we use to feed it are. This puts the 21st century teacher in a critical spot – of mastering constantly

evolving technology and digital learning tools – the same tools their students use every day (TeachThought Staff).

In order for the 21st century student to remain motivated to learn, they must have educators that are willing to teach them with the tools of the 21st century. "Our children live in a global, digital world – a world transformed by technology and human ingenuity" (Grasty). This is happening all around them – at home, out in public, with their friends, everywhere. For them to be asked to sit within a classroom for roughly eight hours a day that is full of teaching tools from 20-30 years ago in order to gain the best education possible is wishful thinking. The main 21st century skills for students – critical thinking, creativity, problem solving, and collaboration cannot be fully explored by the chalk/dry erase board and limited text books. Students need to be using the same 21st century tools in the classroom that they are used to seeing in their daily life, and beyond to continue to stretch them in these areas.

4. A demonstration of thoughtful understanding of social, ethical technology use.

Along with the use of technology within the classroom comes the need for it to be used appropriately, safely, and legally. It is the educator's responsibility to model digital citizenship and responsibility (NETS). It cannot be assumed that students already know about this aspect of technology use, they need to be educated. Some of the most prominent contemporary issues facing school technologists today are digital equity, privacy of electronic student records, student online safety, and copyright infringement (Williamson & Redish, 2009).

As new technology continues to grow and new websites continue to appear, the educator has a responsibility to create a safe environment for the students, both in and out of the classroom. The “digital citizenship and responsibility” standard ensures that educators understand local and global society issues and responsibility in an evolving digital culture and exhibit legal and ethical behaving in their professional practices (Redish & Williamson). Most online safety concerns are centered around online profiles on social networking sites, but school and school districts struggle with online safety in classrooms as well (Redish & Williamson). It is the educator’s responsibility to model professional practices that involve using the internet, websites, online tools, and social networking websites to help create student safety. It is also the educator’s responsibility to become familiar with copyright laws and to teach the students how to have them properly cite the information they acquire online. It is the school district and educator’s responsibility to ensure that all students have equal access to all available technology regardless of their socio-economic status or if they have a disability. Educators also need to take responsibility to ensure the privacy of student records by doing things like using stronger passwords and locking their screens when they are away from them. As the use of technology continues to advance, so must the desire and knowledge of how to do it responsibly.

This paper touches the surface of a beginning philosophy of Instructional Technology. This philosophy will continue to develop and acquire more detail as more knowledge about the subject is gained. At the heart of it, this philosophy seeks to find ways to better educate the student and the use of technology in the classroom is a

powerful tool in order to do so. A tool that must be continually studied, honed, and explored.

Bibliography

Abbey, Evan. The Digital Curriculum. Retrieved from https://brightspace.uakron.edu/d2l/le/content/4250341/viewContent/4864121/View

Crosta, L. (2004). Beyond the Use of New Technologies in Adult Distance Courses: an Ethical Approach. International Journal on E-Learning. ISSN:1537-2456

Grasty, L., Gurley, L., Kelly, G., Zarachowicz, A. Communicating with 21st Century Learners. Retrieved from https://www.slideshare.net/lgurley/communicating-with-21st-century-learners-1587210

Koehler, M. J., & Mishra, P. (2008). Introducing TPCK. In AACET Committee on Innovation and Technology (Ed.), Handbook of technological pedagogical content knowledge (TPCK) for Educators (pp. 3-29). New York, NY: Routledge.

NETS Project (2007). National Educational Technology Standards for Teachers: Second Edition. Washington, DC.

Redish, T., & Williamson, T. (2009). ISTE's Technology Facilitation and Leadership Standards. Washington, DC.

Schmidt, D. A., Baran, E., Thompson, A. D., Mishra, P., Koehler, M. J., & Shin, T. S. (Winter 2009–10). Technological Pedagogical Content. ISTE , 123-129.

TeachThought Staff. (2015). 9 Learning Tools Every 21st Century Teacher Should Be Able to Use. Retrieved from https://www.teachthought.com/the-future-of-learning/9-digital-learning-tools-every-21st-century-teacher-should-be-able-to-use/