Teaching with Technology

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Introduction

In the United States (U.S.), the conversation is shifting from whether technology should be used to how it can be used to “improve learning to ensure that all students have access to high-quality educational experiences” (Office of Educational Technology, 2017, p. 7). The purpose of this paper is to illustrate how teaching with technology enhances student learning, with specific attention to how technology supports the development of non-cognitive, or social emotional learning (SEL), competencies among both youth and adults.

The sections that follow use examples from the Sanford Educational Programs Portal (i.e., The Sanford Harmony Online Learning Portal and The Sanford Inspire Online Learning Portal). The Sanford Programs Portal is a unique approach to supporting the development of SEL competencies in educational settings, which include K-12 classrooms, afterschool programs, and other settings and environments where youth learn and grow. The examples show how the comprehensive and valuable SEL lessons offered by Harmony will become even more effective and accessible as we transition into a digital-first experience. We’ll illustrate how the Portal enables teachers to build connections and a sense of community in their classrooms.
Technology in the Classroom

According to the U.S. Department of Education’s Office of Educational Technology (2017):

Technology can be a powerful tool for transforming learning. It can help affirm and advance relationships between educators and students, reinvent our approaches to learning and collaboration, shrink long-standing equity and accessibility gaps, and adapt learning experiences to meet the needs of all learners. Our schools, community colleges, adult learning centers and universities should be incubators of exploration and invention. Educators should be collaborators in learning, seeking new knowledge and constantly acquiring new skills alongside their students. Education leaders should set a vision for creating learning experiences that provide the right tools and supports for all learners to thrive. (p. 3)

Classroom access to educational technologies has increased significantly over the past two decades (Herold, 2016; Kormos, 2018). As more schools move towards digital learning environments, there are more possibilities to individualize learning (Lynch, 2018). New technologies engage students and spur learning by varying the way instruction is delivered (Wolf, Lindeman, Wolf, & Dunnerstick, 2011). Richard Culatta, Chief Executive Officer of the International Society for Technology in Education (ISTE), explains how a clear direction and common language guiding technology can lead to “significant improvements in student achievement and engagement through their use of technology” (p. 26).

According to the International Society for Technology in Education (2018):

The standards are not just a one-time project, program or event. It’s like breathing – a continual, simultaneous exercise that is both simply elegant and complex. It’s about leading with instruction, instead of leading with a tool. (p. 22).

Developed with input from thousands of educators from around the world, ISTE developed a set of competencies framed around what educators see as critical skills and behaviors for students. As access to technology becomes more common in schools, educational leaders are grappling with how best “to use technology to enhance learning and close equity gaps” (Culatta, 2019, p. 26).

Learning for a Digital Society
The Portal enhances skills needed to participate and lead in a digital society

Results from Common Sense’s (2019) nationally representative survey of over 1,200 K-12 teachers describes the state of the 21st-century classroom by asking teachers about their experiences and attitudes around technology in the classroom (Vega & Robb, 2019). Technology supports teaching and learning in schools and classrooms, and takes on several different forms, such as handheld devices, computers, iPads, or Chromebooks.

In addition, the skills needed to think critically and engage online in a safe and responsible manner may be addressed through digital citizenship curricula and competencies. Digital citizenship is defined as thinking critically, behaving safely, and participating responsibility in the digital world (Vega & Robb, 2019).
Common Sense Media has defined six key digital citizenship competencies:

1. Media balance and well-being
2. Privacy and safety
3. Digital footprint and identity
4. Relationships and communication
5. Digital drama, cyberbullying, and hate speech
6. News and media literacy

The Common Sense survey also identifies areas that can be addressed with regard to technology in classrooms. First, only four out of ten teachers consider the professional development they received to support their use of educational technology to be very or extremely effective (Vega & Robb, 2019). Second, approximately one-third of teachers report that they had access to at least one technology product that they didn’t use, and the top reasons for not using technology products were: a) products not relevant to students’ learning needs; b) not engaging for students’ learning; or c) not effective for developing students’ knowledge and/or skills.

The findings from the Common Sense study illustrate how important it is for educators to effectively use technology products to support student success. Using various kinds of technologies, students and teachers access diverse learning activities, materials, videos, and tools found online. These resources prepare youth by enhancing skills needed to participate and lead in a digital society. According to Dr. Kecia Ray, past president of ISTE, digital content should be innovative and encourage creativity (Lynch, 2018). The Sanford Portal offers engaging graphics and interactive elements. It offers access to various activities, including SEL lessons, storybooks, and relevant resources to guide classroom instruction around SEL topics. The Sanford Portal is both relevant to and engaging for students’ learning needs, and has been shown to effectively develop students’ knowledge and skills specifically related to social emotional learning.

Excellence in Instruction

The Portal provides the most up-to-date and relevant content

Using technology in the PreK-12 classroom has shown potential to promote critical thinking, problem solving, and communication skills (Saavedra & Opfer, 2012). Educational technologies address various challenges that might be encountered in the learning process, such as outdated content and resources (Kormos, 2018). Teaching with technology, including use of the Sanford Portal, offers the chance to update and revise lessons to stay current with new data and research findings from the field of social emotional learning. Educators can have more confidence in using the Portal with the knowledge that it offers current, engaging, and relevant materials. The layout of the Portal is user-friendly, and the materials can be easily accessed as they are organized by grade level; unit (e.g., diversity & inclusion; empathy & critical thinking, etc.). The Portal also presents additional program resources in a convenient navigation bar, which is found at the top of each Online Learning Portal.
“The Portal connects to the everyday life of a teacher. Everything is there and just in time. You don’t have to unpack a box and figure out how to connect a particular lesson or activity with other materials in the box. Think of the world we live in today – you might check the news, make an online purchase, and ask Alexa to play your favorite song, while texting a friend. The Portal is empowering because you can create your own world when you want it.”

Margaret Johnson  
Content Manager, Sanford Programs

As we assess the effectiveness of the Portal, one main concern is the academic quality of the content (Lynch, 2018). In line with recommendations from past president of ISTE, Dr. Kecia Ray, the digital content provided through the Portal is well-written, credible, accurate, and current. The lessons and activities available on the Portal are also aligned with state standards and with the Collaborative on Academic and Social Emotional Learning (CASEL) (For more information, please see the Alignment Guides). The Portal is not simply about digitizing hardcopy materials and resources, but it offers a way to organize and present these important tools in a way that can be accessed at any time and from any location. With use of the Portal, a variety of instructional resources can be more easily accessed simultaneously.
“It is exhilarating to see the cross section of digital transformation and social emotional learning. As someone who has witnessed the ed tech transformation since 1983, I have seen the way in which technology can provide a resource to students with a shallow voice or students who feel they don’t belong. This research and the resources within the Portal will be an invaluable resource to teachers and leaders throughout the world who want to truly utilize technology to the benefit of learning and teaching.”

Dr. Kecia Ray
Past President ISTE; Instructor, Johns Hopkins University, and CEO of K20Connect

Active and Collaborative Learning

The Portal is relationship-focused and sees teachers and students as partners in the learning process

Cardullo, Wilson, and Zygouris-Coe (2015) note the benefits of teaching techniques that encourage students to actively engage with the material presented. As they explain, “In active learning classrooms, the teacher or instructor sets up the context for learning (i.e., the activity, the situation, the task, the process) that engages students in active learning.... Learning is not the same as receiving information” (p. 2). In other words, active learning is an instructional method that engages students in the learning process and requires students to do meaningful learning activities. Such activities offer the chance to practice SEL skills such as problem solving and communication.

Keeping in mind the importance of active learning, another major goal for a learning-centered environment is to be collaborative and/or interactive. Technology facilitates interactions in learning especially when using practical tools that can be easily accessed (Sabzian, Gilakjani, & Sodouri, 2013). Technology has the potential to support and create interactive learning environments. Subsequently, a positive effect on the classroom environment is an increase in active and collaborative learning between teachers and students.

Student perspectives on technology also support a digital transformation. Technology helps to build excitement and accelerates learning, especially when practical tools can be easily accessed (Fullan, 2013; Sabzian, Gilakjani, & Sodouri, 2013). Through engaging activities and discussion-based learning experiences, Sanford Harmony program encourages an environment where teachers and students can share their unique viewpoints while learning the value of multiple perspectives from their peers. These kinds of experiences prepare students to participate in society, develop understanding and empathy across perceived differences, and learn communication skills that support both academic and personal success.

When using the Sanford Portal, students and their teachers collaborate as partners in the learning process (Fullan, 2013). Rather than students working individually, activities that offer opportunities for social interaction, such as discussion-based experiences and activities accessed through the Portal, help to facilitate a learner- or student-centered classroom. When students become partners in their own instruction, their self-worth, confidence, and ownership of the learning process increase (Hamilton, 2015; Sabzian, Gilakjani, & Sodouri, 2013).
“The transformation to digital will help to ensure that Sanford Harmony provides access to high-quality resources, tools, and training in order to sustain the program’s long-term success. Sanford Programs remains committed to working with state, non-profit, and district leaders to ensure that its high-quality innovations are offered equitably across diverse learning environments and contexts. Accommodations will continue to be made for districts requiring physical kits due to technology constraints and/or other barriers to implementation.”

Amber Duonnolo
Director, Sanford Harmony

Teacher as Activator

The Portal is informed by the science of learning and development

New insights from the science of learning and development (or SOLD) are improving current knowledge and understanding of how individuals learn, and of the contextual factors that shape teaching and learning experiences (Darling-Hammond, Flook, Cook-Harvey, Barron, & Osher, 2019).

Technology provides a personalized learning experience, as well as allows for rethinking of the design of learning spaces (Office of Educational Technology, 2017).

A digital use divide exists between learners using technology in active and collaborative ways and those using technology primarily for passive content consumption or drill-and-practice only; however, teachers play a significant role influencing the learning environment. In fact, it is well known among educational researchers that the single most powerful influence on student achievement is excellence in teaching (Hattie, 2003, 2012).

In a meta-analysis of over 1,000 research studies, Hattie (2012) examines the effect size of teachers’ various instructional practices. According to Hattie,

“An effect size is a useful method for comparing results on different measures (such as standardized, teacher-made tests, student work) or over time, or between groups, on a scale that allows multiple comparisons independent of the original test scoring (for example, marked out of 10, or 100), across content, and over time. This independent scale is one of the major attractions for using effect sizes, because it allows relative comparisons about various influences on student achievement.” (p. 3)

Fullan (2013) posits that Hattie’s findings illustrate a shift from “Teacher as Facilitator” to “Teacher as Activator.” His insights shed light on changes in student and teachers’ relationships explaining “we don’t want ‘a guide on the side’ anymore than we need a ‘sage on the stage.’ More proactive partnership will be required” (p. 25). Current efforts are focused on articulating and describing what this new learning relationship looks like and its benefits for students. The new question to ask, as suggested by Fullan (2013), is “with a strong teacher-learner partnership, how could technology be used to deepen and accelerate learning” (p. 25).
“Educators that are activators create conditions for student agency that result in powerful and deep learning practices that honor student voice, creativity, and culturally responsive pedagogical practices. Through a powerful triangulated relationship between the student, content, and educator--technology then becomes a quality accelerator in the digital learning ecosystem.”

Dr. Frances Gipson
Associate Professor, Claremont Graduate University Professor, Urban Leadership Program

Conclusion

There are two major transformations occurring in education: a transition to digital learning and the integration of SEL into academics and schoolwide practices. Interestingly, policymakers and practitioners are approaching both SEL integration and the digital transformation process in quite a similar manner. Both SEL and technology have strong implications for student learning and serve as important educational strategies facilitating short- and long-term student success. Schools seeking to integrate SEL and technology into their instructional cultures will benefit from having a clear direction and common language to guide these changes.

This article has identified strategies to support the development of both SEL and technology with the hope of creating and sustaining positive, safe, and equitable learning environments.
References

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