

EDTC 813: Advanced Using Integrated Software across the Curriculum

Project 2

Creating a Meaningful Learning Environment with Technology

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Using technology in the classroom is a powerful vehicle for promoting learning and providing valuable educational opportunities for students. Technology-driven learning can enhance children's cognitive development and teach them to become designers and creators of their own computerized projects (Bers, 2012, p.7). School districts establish a district technology plan for incorporating technology into their instructional process. This document serves as a guiding principle for administrators and educators towards aligning appropriate technology-enriched activities with district curriculum. To develop effective technology plans, districts use Positive Technological Development (PTD) Framework. The framework places emphasis on teaching digital literacy for the 21st century and takes the overall development of the student into consideration (Bers, 2012).

Positive Technological Framework (or PTD) is an underlying foundation for increasing learning assets and encouraging learning behaviors. PTD is comprised of three components: technology activities, applied practice, and individual assets. The assets are divided into six C's: contribution, connection, caring, character, confidence, and competence, which are viewed as the path towards building a vigorous community. The second set of C's is aligned to the individual assets and the application of practice as, community building, collaboration, communication, choices of conduct, creativity, and content creation. Bers (2012) describes these attributes as technology-mediated behaviors that positively engage children when using technology in

schools. This paper takes the PTD framework into account and focuses on the technology-mediated behaviors to analyze the Hillsborough School District Technology Plan.

Hillsborough Township Public School District in Hillsborough, NJ established and published 2016-2019 District Technology Plan that is expected to be implemented by June 30, 2019. The plan focuses on using technology as a transformational vehicle for enhancing learning. The district states that it created “a viable plan to systematically transform instruction through the development of enhancement of the effective implementation of digital learning” (Hillsborough Township Public Schools, 2016, p.2)

This paper evaluates the Hillsborough Township Public School District Technology plan through the lens of six technological design principles. They include content creation, creativity, choices of conduct, communication, collaboration, and community building (Bers, 2012, p.11-12). The items listed in the plan are analyzed by their ability to correlate, contrast, or extend the six technological design principles.

Content Creation

The first principle, content creation, is directly related to the student ability to design and implement their ideas using computer technology. Content creation behavior is described as a possibility to captivate users in computer programming or computer applications that attract them in working with text, video, audio, graphics, and animations (Bers, 2012, p.11). This is a process of constructionism, in which children can develop a sense of competence, talent, and mastery. There are several items in the Hillsborough Township Public School District Technology plan that support creativity and content creation. One of them is introducing students to coding. For example, the benchmark activity 1.5.3 reads, “Explore the feasibility to add

coding into the Grades 1-8 curriculum” (Hillsborough Township Public Schools, 2016, p.14). Providing students with an opportunity to develop code levels gives them an ability to create content within open-ended space, such as creating a piece of code using a black palette of the programming environment.

Creativity

Using students’ natural ability to be creative, technologically enriched environments provide an effective channel for exploration and creativity. Creativity driven behavior is the capability to go beyond standard plans, rules, patterns, relationships, or interpretations and to produce and generate original new ideas and procedures of using innovate new technologies (Bers, 2012, p.12). Creativity can help children have a strong sense of confidence, which makes them believe that they can improve their skills and trust in their potential (p.84). Using Bers’ analogy of a digital playground, the activity 1.6.1, such as “[r]esearch and explore the redesign of the physical space in classrooms, libraries, and other learning spaces to be more conducive to 21st century learners” (Hillsborough Township Public Schools, 2016, p.14) could be considered a digital playground due to its setup promoting open and free exploration (Bers, 2012).

The concept of a digital playground is not only limited to the principle of creativity. The ability to create an age-appropriate learning playground is an extension of all six guiding design principles, where students can not only create new content and choose to explore, but also to communicate, build, and collaborate with others, while contributing to the sense of the class community (Bers, 2012). The concepts of creating, building, communicating, and collaborating with others allow users to have the strong connecting relationship to create new digital tools to

solve general problems. Therefore, in approaching the physical redesign of the learning spaces, the Hillsborough Township Public Schools district incorporates all six pillars of the technologically enhanced education.

Some activities on the Hillsborough District Technology plan are not as encompassing in their nature and focus on developing a specific skill set. For example, the activity 1.5.1 states, “[e]stablish grade level goals on mastering keyboarding, data entry, and basic technology skills into the Grades 3-4 curriculum” (Hillsborough Township Public Schools, 2016, p.13). While it provides the students with an ability to develop a particular skill set, it contrasts the ideas of creativity, as to how creative can one get with typing or data entry? Perhaps, it could be further extended into other areas of technological applications, such as collaboration and communication.

Choices of Conduct

As children develop, they will go through various stages and experiences if life. At times, the right choice is made, and at other times, the wrong choice is made. The choices they make regarding their behavior lead towards the development of their character. The Hillsborough School District Technology Plan’s second goal correlates to the choices of conduct, in which the district plans to promote and enforce policies to build 21st Century Global Citizenship (Hillsborough Township Public Schools, 2016, p.13). The Twenty-First Century Global Citizenship is a combination of the various skills below:

- Critical Thinking/Problem Solving - having inductive/deductive reasoning skills to analyze the interaction of elements.

- Community and Collaboration - the ability to improve verbal/nonverbal communication tactics in a variety of contexts.
- Technological Skills - the ability to determine the most effective use of technology.
- Adaptability- having the flexibility when situations change, and obstacle are presented.
- Cross-Cultural Awareness - the ability to communicate with and understand other cultures. (Educational Tours, n.d.)

Digital citizenship and digital responsibility will also be the focus of the district as they train staff on cyberbullying, cybersecurity, and protecting oneself online. All staff members will be trained on how to exhibit digitally appropriate behavior with students.

Communication

Communication is one of the cornerstones of effective learning. Technology guides children to communicate, facilitate social interaction, and construct stronger language and literacy development (Bers, 2012, p.103). Children tend to communicate faster when using technology to interact with their peers. Collaboration is the process in which individuals work together to recognize common goals; it encourages social and pro-social development. Communication is the exchange of verbal and non-verbal information between two places. An effective communication process is attained through understanding. Technology provides children with support in developing their communication skills in various ways. Over the years, social media has played a major role in the development of children's various communication skills. Verbal/Non-Verbal communication skills are developed through the use of smartphones,

social media, and video conferencing on Skype or Google Hangouts. Written communication skills are developed through emails, texting, along with social media. Visual communication skills are developed and commonly used to communicate through the use of images or emojis.

The Hillsborough School District recognizes the importance of communication within the digital learning environment. The Hillsborough School District Technology Plan correlates with the behavior of communication as it continues to evaluate and implement new communications and educational programs to promote digital community citizenship (Hillsborough Township Public Schools, 2016, p.13). The district plans to create various committees to improve communication with parents and the local community to promote awareness on key issues such as cybersecurity, cyberbullying, and digital citizenship. The behavior of communication can be extended in the district technology plan by assessing parent and student accessibility/usage of technology in their homes. While the fourth goal in the technology plan focuses on ensuring that all instructional and administrative areas in the district have access to high-speed internet (Hillsborough Township Public Schools, 2016), assumptions that all students have technological devices and internet access at home cannot be made.

Collaboration

Collaboration enables individuals to work together to achieve a defined and common purpose. As children develop socially, they build relationships that involve emotions as they collaborate. Bers's (2012) identifies a direct relationship between collaboration and caring. The effective collaboration consists of caring for the needs and ideas of others. As students develop and learn to respect and care for each other, the behavior of collaboration becomes stronger, and students progress academically. The report titled *The shared work of learning: Lifting*

educational achievement through collaboration, by Bentley & Cazaly (2015) presents the importance of collaboration as it enables schools to sustain their focus on student achievement building mutually reinforcing connections between academic progress and student wellbeing.

The Hillsborough School District recognizes the importance of collaboration in creating technologically enhanced, meaningful learning environment. The Hillsborough School District Technology Plan correlates with the behavior of collaboration in their first goal in encouraging teachers to utilize technology to improve and transform the learning environment while maximizing opportunities towards globalization of the curriculum, asynchronous learning, and creation, collaboration, and publication of digital content (Hillsborough Township Public Schools, 2016, p.12). Through the integration and use of technology, students and staff can collaborate and communicate and share their work through platforms such as Google classroom.

Community Building

Community building is one of the key behaviors within PTD framework. The behavior of community building is the ability to use technology to enhance the community and its relationships (Bers, 2012, p.12). The community building process in the technology plan is based on activities 1.5.5, 2.2.2, 3.2.2 as it focuses on offering community awareness programs on cybersecurity, cyberbullying, and digital citizenship. The plan also addresses the special needs of individual learners and plans to work closely with special education staff to find alternate technology services/devices that best meet the learner's needs. (Hillsborough Township Public Schools, 2016, p.13-15). By working together, parents and special education staff members can create a strong bond within the community to enhance communication. This community building process allows students to learn more effectively to promote positive and productive

behaviors. As stated by Bers (2012), parents may not be familiar with the new virtual world of technology, especially with Internet safety (p.43). Parents and teachers can work together to help children learn how to be safe when using technology. Therefore, technology training can be provided to enhance that knowledge.

Furthermore, activity 3.3.3, “Implement the technology integration guide/rubric along with targeted, interactive digital resources to establish a framework for successful technology integration” (Hillsborough Township Public Schools, 2016, p.15) gives children the choice to use technology in their classroom, such as social media and social gaming in which users meet face-to-face and interact with one another. This process can also be a choice of conduct for the district because the district chose to transition to a technology resource that is always available to students. The digital landscape, such as the playground, allows children the freedom to make their own decision and learn to be aware of their consequences, to take risks, and to think on their actions (Bers, 2012, p.91). The ability to choose allows users to build a strong sense of character, explore their moral identities, and to self-grow. According to Bers (2012), the use of social media allows children to engage in “decision making, perspective taking, conflict resolution, and values clarification” (p.95).

Conclusion

The Hillsborough School District Technology Plan is an explicit report that details the dedications made by the district to give their students a valuable education strong in technology that transforms teaching through the expansion and innovation of digital learning. This plan was analyzed and compared to Bers’ (2012) six technology-mediated behaviors: content creation, creativity, choices of conduct, communication, collaboration, and community building.

Furthermore, this project expanded on the existing program to resemble the framework as the majority of the plan's goals, and activities align with the framework. Overall, Hillsborough Township Public School District made a positive technological effort to enhance, inform, and transform the learning outcome of today's' youth development.

References

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