

## Project 2

### Creating Meaningful Learning Environments with Technology

Douglas Koch, Linda Lampert, Carol Munn, and Susan VanAlstyne

New Jersey City University

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### **Introduction**

The Langston Hughes Elementary School of Publishing and Fine Arts (LHES), located in East Orange, New Jersey, is a Pre-K through fifth-grade school with space for up to 600 students complimented by 80 classroom teachers, administrators, teacher-tutors, classroom assistants, and custodial staff. LHES has a daily curriculum of Language Arts Literacy, Mathematics, Fine Arts, and Technology with a vision statement to “create and maintain a safe, healthy, supportive school environment and provide quality educational programs that promote the academic success of every student and the professional growth of every staff member” (East Orange School District, 2017).

LHES has created a Technology Plan which evaluated the school’s readiness in creating future-ready students. In this plan, they evaluated the school across eight key categories: Curriculum, Instruction, and Assessment; Use of Time; Technology, Networks, and Hardware; Data and Privacy; Community Partnerships; Professional Learning; Budget and Resources; and Innovative Leadership. The Technology Plan was generated through the evaluation of survey results of students, parents, teachers, and school administrators from April 2016 to May 2017.

In today’s world of the local and global community, our education system should be turning out future-ready students with skills that can compete in this environment. This is a challenge in today’s education system. Schools should be equipped to handle this, but in some instances, the functionality is not a choice. With the emphasis placed on educating our youth within the 21st-century skill set, districts need to keep in pace with the emerging new technologies. This report looks to evaluate the readiness of the school to accomplish this mission from the

standpoint of utilizing technology promoting a positive developmental experience for the learners through the appropriate use of technologies.

### **Positive Technological Development Framework**

Marina Bers (2106) describes Positive Technological Development (PTD) as a theoretical framework linking individual characteristics with technology-related behaviors that are situated within a practice. The six characteristics, or assets, belong to either an intrapersonal or interpersonal domain and are important in the positive development of a student. The intrapersonal domain is made up of Competence, Confidence, and character while the interpersonal domain contains Caring, Connection, and Contribution assets. These are generally mapped to six technologically-mediated behaviors - Content Creation, Creativity, Choice of Conduct, Communication, Collaboration, and Community Building respectively.

**Content creation.** The first behavior in the PTD Framework is content creation. This behavior is important because it encourages students to create content by engaging users in computer programming or computer applications. This process promotes technological fluency and has a strong connection with competence.

**Creativity.** Creativity is valuable because it goes beyond traditional ideas and facilitates new ideas and methods of using technologies. Creativity promotes and highly correlates with confidence.

**Choice of conduct.** The development of good character traits in young elementary age students can be facilitated by providing opportunities to make self-directed decisions followed by a period of reflection on the consequences of that decision. The framework describes the relationship between character and the choices one makes with technological tools being used in

an academic setting to help facilitate the development of a moral character through the practice of decision making.

**Communication.** This behavior is vital in education and stretches across to the global community. In education, different communication styles, permit students to feel empowered and gives them a voice. This skill generates individualized expression through the use of different technologies; digital or non-digital, verbal or non-verbal conversations with peers, teachers, and community members; local and global. This skill builds on connections within the dynamics of the classroom and beyond and imperative for students to master in order to become productive global citizens in the 21st-century.

**Collaboration.** Collaboration encompasses working with others and sharing tasks. Bers aligns collaboration with the asset of caring. Collaboration leads to positive relationships that result in caring about each other.

**Community building.** The final behavior is community building, and collaborative activities often complement community building and encompass all the other behaviors. Technology has made it possible to use the Internet to further the reach of community building.

### **Analysis of Langston Hughes Technology Plan**

The following analysis is a review of how this theoretical framework aligns with the Langston Hughes Technology Plan followed with recommendations for future endeavors.

**Content creation.** The data regarding student use of technology for learning varied by the type of activity. The lowest reported use was social media, emailing, and texting. Since LHES is an elementary school, this is expected. The next lowest reported activities, which are simulation programs, robots, and using the Internet for research. The most used applications

were learning games. This evidence shows that there is room for this area to be extended according to Bers' concept of Digital Technology for Positive Youth Development. It is important for students to create personally meaningful projects. They should have the opportunity to work with text, video, audio, graphics, and animation as part of content creation. Students should be encouraged to become creators, not consumers. By doing this, they become competent in participating in online culture.

In order to extend this area in the future to support the goal of engaging students in good, healthy, and productive personal trajectory, teachers need to think about whether the technology supports a playground, as opposed to a playpen experience and whether or not the technology engages students in expressing themselves by creating projects that they care about.

**Creativity.** The data shows that LHES teachers use word processing and online tests as the most frequent use of technology for learning, while digital imaging and/or video production were rated one of the lowest. This contrasts with the framework. In fact, only half of the teachers said they feel empowered enough to innovate and take professional risks to transform their classroom into 21st-century learning environments. While 32% said that they implement strategies to promote 21st-century skills/deeper learning outcomes integrated into the curriculum. To extend this area in the future, students need opportunities that support creative expression, sharing and reflecting. Teachers need to envision ways that technology can be used to enable students to create projects that reflect their own diverse ideas.

**Choices of conduct.** In general, the concept of digital citizenship is addressed in the gear related to Curriculum, Instruction, and Assessment. In this section, fewer than one in three teachers responded that they assess digital citizenship skills through direct observation or

through more formal assessments. For personalized learning, there is little implementation according to teachers, administrator, and educational technology coordinators while students score highly in this dimension. This is likely the result of the point of view and may be appropriate for the age range of the students at this school. The same is true in the areas of personalized learning and leveraging technology which includes cyber issues related to bullying, accessing of appropriate materials, posting of appropriate content, etc.

In the area of digital citizenship, there is little to no emphasis by teachers and administration to promote or track the progress of this construct. It is recommended that this area is addressed as this is a period of time in childhood development where competency is developed.

**Communication.** During school hours, only 24% of the students work online collaboratively, 49% of students use the internet for research, 77% do not use email or text, and 86% never use social media (Facebook, Twitter, or Instagram) in school. Social media tools are digital showcases which can have a positive role in the students' lives. Students are tech-savvy and already use these platforms in their personal life, schools should be capitalizing on their learned knowledge and infuse into the classroom. Exposing the students in a safe school environment to Digital Citizenship as part of communications skills are necessary and important for the 21st-century learner. In the area of professional development, LHES received a 5.3 out of 10 on the digital readiness score. Teachers should be given the opportunity to participate in additional professional development activities to stay current with the methodology and technology available in the classroom such as Google Suites and PHET (interactive simulations).

In the digital landscape of today, communication creates a positive environment while connecting teachers, peers, friends, parents, and people in the community. The community connection is missing at LHES, according to the report, 71% of the students have never interacted with the community members. Communication and connecting with the global community are imperative for today's student in order to compete later in the global marketplace. LHES scored only a 3.6 out of 10 and digital implementation 3.1 out of 10. According to the section relating to a robust infrastructure, there is a gap in the technology infrastructure to support communications at LHES. The broadband width is not sufficient, designed, or deployed in a manner sufficient to handle an update. The district should reach out for additional support because communication and connection are keys to growing and learning in the connected classroom.

**Collaboration.** Collaborative activities often lead to community building, which is the sixth behavior. Overall the LHES supports a close community of teachers, parents, and the local community to build partnerships. The importance of charitable events and community involvement is part of the school culture as detailed on the school website. The LHES provides many opportunities for students to use technology to collaborate. However, according to the report, 68% of teachers and 48% of students feel that the web filtering system is too strict. This may hinder some levels of collaboration. Although 60% of parents agree that their children have the opportunity to learn about new cultures through online communication and digital projects. Specific activities that mention promoting collaboration include where students help each other to complete projects and the students engage in activities such as sending thank you cards to classmates. Collaboration promotes sharing not competition. It is evident that LHES is working

to integrate the meaningful use of technology, complementing the Bers PTD framework, there are opportunities for improvement.

The school and the district support a culture of collaboration to promote innovation. The school district offers all students email, resource libraries and a variety of other resources. The respondents, 28 teachers also have mixed responses about the school is supporting a culture of collaboration with only 14% feel there is low to moderate implementation and 28% with low to no implementation and 50% feel there is moderate to full implementation. Global and cultural awareness is also a result of collaboration and Bers behavior of community building. Digital networks are necessary to develop internal and external collaborations to support the asset of caring. The following results need to be reevaluated 60% of parents agree that students get the opportunity to learn from new cultures and the community through online communications and digital projects and only 35% of teachers agree. These interactions also support caring as the students are learning about diversity. LHES initiatives complement Bers PTD framework. With the mixed survey results, collaboration could be extended or further developed in the future.

**Community building.** The LHES mission statement mentions respect and responsibility, both elements of community building. Principal Dr. Vincent L. Stallings' welcome letter to the students has the theme of community and being part of something bigger to become productive citizens who contribute to the community. Although not technology driven, the following activities are some examples of collaboration and community building where the students share their yearly student Art Exhibition at Livingston Mall and the annual school/district STEM fair to more charitable events such as the annual Thanksgiving food drive, pennies for patients collection, and read across America.



It is the recommendation for LHES to extend the community building online and integrating virtual gaming and virtual communities to enhance the behavior of community building further. Though all the current activities complement Bers PTD framework, the recommendation is to continue the current activities and to implement more technology-based projects in the curriculum.

### **Conclusion and Recommendations**

As part of the Future-Ready Pledge, LHES is on its way in assembling the communication directives and goals which will help each student become successful and meaningful contributors to the global community. Within the school, the infrastructure is somewhat effective with a setup of different managerial systems, online resources including a communication system, collaboration tools all helping the school move toward an increase in digital readiness and implementation for all stakeholders.

There are three recommendations for LHES prior to the next self-evaluation. First is to provide professional development for teachers and administrators in the areas of technology implementation so that all parties understand the scope of initiatives. Next, it is recommended that the future report incorporate a larger sample of students, parents, as well as teachers. Finally, we recommend that resources be set aside to specifically address issues of infrastructure set up and maintenance.

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