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Fostering a Digital Learning Environment

Today's students will not live in a world where things change relatively slowly (as many of us did) but rather one in which things change extremely rapidly—daily and exponentially. So today's teachers need to be sure that, no matter what subjects they are teaching, they are teaching it with the future in mind. (Marc R. Prensky, 2010, p. 5)

OVERVIEW

In this chapter, teachers will learn how to “work” their classrooms by fostering an environment that provides opportunities for student communication, collaboration, creativity, and critical thinking. The digital learning environment allows for teachers to differentiate their instruction by creating a classroom space that supports content, language, and technology targets. The digital learning classroom offers a unique experience for each student that is centered on active learning and student engagement. Within this chapter, teachers will discover that creating a digital learning environment is not about using every digital tool or application available, it's about choosing the right one to enhance instruction and provide ELs equity and accessibility within the classroom. As teachers, we may not be able to control whether students have access to technology or Internet resources at home; however, providing access to a range of technology tools in the classroom is vital for ELs. ELs must use technology in a productive and collaborative classroom environment that will help develop

language, literacy, and discipline-specific skills needed for college and career readiness. Teachers can share with ELs new technologies and resources that promote future educational and global opportunities.

For English learners, a digital learning environment provides opportunities to engage in the learning process and gain essential digital and informational literacy skills needed for real-life situations. Teachers move away from traditional direct instruction and become facilitators of a classroom where the delivery of instruction is based on personalized learning, inquiry and research, and positive student engagement. As Alan November (2012) stated, “while life outside of our schools has changed dramatically over the past century, we cling to an early industrialized classroom model that often fails to encourage collaboration, innovation, a global work ethic, or critical problem-solving skills. Our students are caught in a process we call “cover the curriculum,” regardless of their mastery of the material.” Within this chapter, we discuss the components of a digital age learning environment and classroom technology tools as they relate specifically to the instructional needs of English learners.

DIGITAL AGE LEARNING EXPERIENCE

Teacher Engagement

A digital learning environment requires that teachers enhance and support their instruction with innovative ways to use classroom technology tools. Within a digital learning environment, technology is an instructional tool and not the subject of instruction. It promotes and extends learning for English learners. To begin, teachers and administrators must be effective users of classroom technology tools. For many teachers, integrating technology can be overwhelming while they work toward meeting the routine demands of state learning standards, delivery of content, and formalized assessments. Eventually, teachers will recognize that creating a digital learning environment will support these efforts and encourage a shift in teaching from *what we learn* to *how we learn*.

Schools can support a culture of sharing and learning for all technology users. With this said, schools can promote the use of technology by training teachers and modeling the effective use of technology tools in their classrooms. Teachers can become active learners in the classroom along with their students and move away from the lecture-based setting by facilitating new student-driven models of instruction. The classroom can become a student-centered environment with an emphasis on meeting various learning styles and readiness that encourage ELs to gain understanding in their new language.

Today's current and developing technology tools have expanded opportunities for teachers to provide real-world experiences by virtualizing their classrooms. For example, podcasting platforms are the perfect tool to help English learners verbally share their ideas without the barrier of text. Podcasting platforms such as audioBoom or VoiceThread can easily open doors to global communication for ELs who may be limited in how much they can participate in the classroom. By podcasting, students can create web-based podcasts, share audio clips, or access audio content online. Students can show what they've learned by creating podcast tutorials to review concepts learned in the classroom.

Whether the teacher is a beginner or expert in using technology, finding the technology tools that meet the needs of ELs in the classroom can be a daunting task. Teachers can begin to examine ways to integrate technology and foster a digital age environment by taking a closer look at

1. differentiating the content of what they teach,
2. identifying how students will demonstrate what they have learned, and
3. redesigning the physical structure of the classroom environment.

Teachers become the "guide on the side" and welcome a more active classroom where students can work together and where teachers can provide continuous feedback, evaluation, and support.

ADVANTAGES FOR ELs

One significant advantage of a digital learning environment is that ELs will be motivated and encouraged to share their learning experiences regardless of their language proficiency and prior knowledge, which can oftentimes limit their academic success in the classroom. Strive to provide a safe school environment where ELs of all proficiency levels can interact with their classmates to improve academic content knowledge and language skills using traditional communication methods along with technology tools. Do not segregate ELs by proficiency level for all learning activities; instead use flexible grouping strategies that allow for different levels of ELs to interact with each other and their English-speaking peers for some of the time, whereas at other times they may be grouped homogeneously, especially when foundational skills are addressed. Whenever possible, the students who are proficient and literate in their home languages should have the opportunity to use their native language skills to build comprehension of the target content and to improve communication

in their new language as well. Furthermore, a truly welcoming, inclusive school building will recognize students' home languages as assets and as cultural and linguistic bridges and not consider them as something students need to give up and replace with English.

Contrary to the traditional classroom where teachers spend most of their day standing in front of students teaching content, the digital learning environment builds on students' interaction in a structured approach, through problem solving, inquiry, and research. Teachers model and demonstrate learning by conducting mini-lessons to build background knowledge, preteach vocabulary, scaffold instruction, and model effective ways to use classroom technology tools. Teachers can address the needs of ELs and provide direct instruction to groups or individuals of all language proficiency levels. Students then use classroom technology tools while working in groups, pairs, or independently in a learning space that supports movement and discussion among all learners. When students are able to have a voice in the classroom in this fashion, we enable them to self-direct their own learning process.

THE CLASSROOM SETTING

The structure, design, and physical space within the classroom allow for students to work with peers and encourage investigative learning. "Learning happens anywhere and can be synchronous or asynchronous, formal or informal. The change from passive to active learning and the tensions created in this process affect teaching and learning strategies, technologies and space" (Steelcase, 2014, p. 4). The typical classroom is designed to provide student learning in a traditional direct-instruction environment, whereas the digital learning classroom supports multiple teaching approaches and access to individualized learning and peer-to-peer engagement. In a digital learning classroom, the physical space is set up to allow for movement among students as they actively work within the classrooms in pairs or groups and use technology as a tool for learning. What is the role of a teacher in such a scenario? Teachers must move away from a passive learning environment to an active learning environment. Teachers no longer need to stand in the front of the classroom controlling the learning process. Instead, teachers can take the time to use technology to collaborate with students and personalize instruction to help groups or individual students through the learning process. You can begin to create a digital learning environment by exploring the effects of technology integration on your classroom, including its physical structure. Does your classroom provide a collaborative and language-enriched environment for ELs?

USING CLASSROOM TECHNOLOGY TOOLS

When supporting the unique learning styles of ELs, there are certain features to consider when using current and emerging technology tools in the classroom:

- *Tools that encourage collaboration between the teacher and students (for example, productivity tools).* Productivity tools streamline the classroom workflow and can support ELs with note taking, word comprehension, and organizational skills that can help drive academic success.
- *Tools that allow teachers to manage lessons, create and share content, and connect with other colleagues (for example, social learning platforms).* Social learning platforms or learning management systems allow teachers to easily manage their classrooms. The platform allows for class discussions, assignments, and student collaboration within a learning community.
- *Tools that give students options to show off their knowledge (such as, screencasts or multimedia presentations).* Multimedia tools allow teachers to create presentations to increase student learning. Students can create multimedia presentations by using text, audio, images, and video to tell digital stories and create interactive video presentations.

Digital learning environments support the International Society for Technology in Education Standards for Teachers ISTE 2. a–d:

2. Design and Develop Digital Age Learning Experiences and Assessments

Teachers design, develop, and evaluate authentic learning experiences and assessments incorporating contemporary tools and resources to maximize content learning in context and to develop the knowledge, skills, and attitudes identified in the ISTE Student Standards.

- a. Design or adapt relevant learning experiences that incorporate digital tools and resources to promote student learning and creativity.
- b. Develop technology-enriched learning environments that enable all students to pursue their individual curiosities and become active participants in setting their own educational goals, managing their own learning, and assessing their own progress.
- c. Customize and personalize learning activities to address students' diverse learning styles, working strategies, and abilities using digital tools and resources.
- d. Provide students with multiple and varied formative and summative assessments aligned with content and technology standards, and use resulting data to inform learning and teaching.

SOURCE: International Society for Technology in Education (2016).

- *Tools that develop language skills through listening, speaking, reading, writing, and viewing (such as podcasts, blogs, e-book readers).* ELs can develop language skills by using mobile devices to readily access e-books and online blogs to build comprehension and higher-order thinking skills.
- *Tools that allow teachers and students to collect, share, and organize resources (for example, QR codes, file hosting services).* Classroom information can be quickly accessed and shared remotely and allow for more interaction among teachers, students, and parents.

UNDERSTANDING ELs

Fostering Receptive and Productive Language Skills Through Student Engagement

Dove, Honigsfeld, and Cohan (2014) emphasize the need for inquiry-based, highly participatory, and engaging learning experiences for ELs and propose the following three critical considerations that benefit all learners:

- Replace lecturing and teacher-dominated, teacher-fronted classes with opportunities for student-directed discovery.
- Shift the classroom interaction from teacher talk to student discussion and extended student responses.
- Invite critical thinking and student ownership of learning through inquiry-based instruction.

ELs will only acquire language and content if they have access to the material, if it is presented through a variety of approaches and methodologies with ample support and scaffold (see mediating strategies to follow) so as to make the lesson comprehensible. Yet it is not enough for ELs to develop strong receptive skills; they need to actively and authentically use the language both in speaking and writing. Allowing for digital storytelling with tools such as Storybird or creating an interactive webpage with Weebly supports and scaffolds instruction via all five language skills.

Mediating Language and Content Through Instructional, Linguistic, Graphic, Visual, and Interactive Supports

Instructional Support

Instructional support can be successfully offered through the gradual release of responsibility model (Fisher & Frey, 2008; Pearson & Gallagher,

1983). This framework of instruction starts out with teacher modeling and moves on to delivering instruction to enhance student understanding in small groups and gradually increasing student independence as the lesson progresses. The four steps are the following:

1. Focus lesson: The teacher sets a purpose for the lesson and models a skill, strategy, or learning task for all learners.
2. Guided instruction: Students practice the new skills alongside the teacher, who differentiates instruction based on students' needs.
3. Student collaboration: Students work in productive learning groups as they engage in a variety of meaningful activities that allow them to interact, solve problems, and gain a clearer understanding of the lesson.
4. Independent practice: Students apply what they have learned.

Classroom instruction that is scaffolded this way allows for various well-supported, structured occasions for students to learn and practice new content and language.

Linguistic Support

Most frequently, teachers provide linguistic support by defining key vocabulary; preteaching essential words and phrases needed for the lesson; and using sentence frames, sentence starters, or paragraph frames to encourage student participation and enhance language production. Apps such as Wordle and Word Mover can be fun and creative ways to explore essential words and phrases. Using the native language will also offer linguistic support to ELs, as will teachers' conscious efforts to adjust their own speech and other text-based resources. Many translation apps and online resources can assist educators in this endeavor. Word cloud generators, such as Wordle, facilitate the study of key words for ELs (see Figure 2.1).

Visual Support

ELs exponentially benefit from seeing what they are also hearing. When visuals are available to supplement verbal input, the additional information gained from the images not only aids in comprehension but helps frontload the instruction by activating students' prior knowledge or building background knowledge much needed for the forthcoming lesson. Visual support can be created by using models, manipulatives, or realia;

Figure 2.1 Wordle Example



wordle.net

traditional images such as photographs, drawings, or sketches; or digital tools that incorporate video clips, clipart, Google Images, or websites such as BrainPOP ESL.

Graphic Support

Similar to the visual support just presented, graphic representations of complex concepts, difficult content, new skills, or language input can also contribute to better understanding and easier processing of the lesson. These tools aid in planning and organizing students' own thoughts as they prepare to speak or write about the new content, thus supporting both oral language production and written work. Holt Interactive Graphic Organizers (<https://my.hrw.com/nsmedia/intgos/html/igo.htm>) offer a wide variety of frequently used graphic supports, including a range of graphic organizers, charts, tables, timelines, and outlines.

Interactive Support

Finally, support may be provided to ELs through a variety of interactive structures. Whole-class or large-group lessons must be frequently interspersed or supplemented with pair work, triad, or other small-group activities. When students *stop and process* or *turn and talk* about the topic, time is allotted for them to formulate their own ideas and practice using academic language. In many classrooms, rotation stations, learning centers, or learning stations are frequently used approaches to group work, in which students collaboratively solve a problem, complete a task, and take ownership of new learning and the academic language and literacy skills connected to them.

MAKE IT YOUR OWN

The survey in Table 2.1 can help teachers identify the technology they are currently using and why, their comfort level with using technology, and how that technology is employed in the physical classroom space. By completing the survey, teacher leaders can recognize professional development needs and assist teachers in the technology planning process.

Table 2.1 Technology Survey

1. How confident are you when using technology in your classroom?
2. What challenges do you face when managing technology in your classroom?
3. What support do you need to effectively integrate technology in your classroom?
4. Does your classroom setting promote interactive group work among students?
5. Does the configuration of the desks or tables allow you to interact freely with groups?
6. Which technology tools do you use in your classroom for teaching and learning?
7. What are the key skills your students will develop by using technology?

CONSIDER THIS

The presence of technology does not make a digital learning environment. Consider what does: a classroom, school, and home environment for ELs that supports full interaction of technology and serves as a scaffolding tool for language and literacy development as well as a learning tool for content attainment. Figure 2.2 is an example of a learning space that encourages an interactive language-enriched environment.

Figure 2.2 Steelcase Node Active Classroom

Steelcase.com

DIGITAL AGE EXPLORER'S CORNER

Personalized Learning Solutions

Many school districts are transforming the learning environment by implementing a one-to-one iPad initiative. During a tour of a middle school, students shared their learning experiences using the iPad and eSpark, a personalized learning solution for the iPad. Students were able to explain how eSpark creates a playlist of educational apps and activities on their iPad by identifying their learning needs based on reading and math assessment data. For example, if a student demonstrates weakness in reading comprehension, eSpark provides apps and activities to help that student remediate that weakness. Teachers monitor academic progress on eSpark and use the data to inform instruction in the classroom. Students were enthusiastic and eager to show us what they've learned and were able to describe the goals and objectives of the program with great clarity and understanding.

This one-to-one iPad initiative has changed the physical space and environment for the students. By carefully arranging the classrooms, this school has managed to set up work areas that are conducive to individual and group learning. The classroom environment promotes engagement by allowing students to move easily inside and outside of the classroom in order to access different areas for information and materials. This school has intentionally developed a climate and culture to encourage deeper engagement among students, which is reflected by the physical environment.

CHAPTER SUMMARY

A digital learning environment is based on personalized learning, inquiry and research, and positive student engagement.

Teachers become the “guide on the side,” providing continuous feedback, evaluation, and support.

The digital learning environment will encourage a shift in teaching from what we learn to how we learn.

Teachers meet the needs of ELs by providing direct instruction to groups or individuals of all language proficiency levels.

Students use classroom technology tools while working in groups, pairs, or independently in an active learning environment.

The structure, design, and physical space of the classroom allow for students to work with peers and encourage investigative learning.

The digital learning classroom supports multiple teaching approaches and access to individualized learning and peer-to-peer engagement.

Physical space is set up to allow for movement among students as they actively work within the classrooms using technology as a tool for learning.

The teacher is not restricted to the front of the classroom but can flow freely among the students to provide additional support.

Teachers choose classroom technology tools that support the instructional needs of ELs.

PLN QUESTIONS

1. How can a digital learning environment be used to meet the needs of English learners?
2. Reflect on a time when you changed your teaching style or lesson to meet the needs of your students. What prompted you to do so? What resources did you change, and what was the result?
3. What steps can you take to move from a teacher-centered environment to a student-centered environment?
4. Describe how you can integrate classroom technology tools in your current teaching practice.
5. Does the structure and physical space of your classroom encourage collaboration among students?