SCHOOL CULTURE AND DIGITAL CULTURE: A COMMITMENT TO THE PRESENT.

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Abstract: *The article discusses the evolution of educational technology in the U.S. education system over the past five decades. It begins by exploring the historical context in which technology became a necessity to prepare for a digital future, especially during the Cold War, when the United States focused its attention on math, science, and technology. The introduction of the Vocational Education Acts of the 1960s funded the incorporation of technology into schools, allowing students to learn programming languages and the use of personal computers. As the 1980s progressed, a common approach to integrating digital culture into education was consolidated. Educators adopted strategies that encouraged the creation of student-centered learning activities, promoting practical exploration and constructivism theory. The introduction of Apple computers into classrooms further boosted the adoption of the technology. With the advent of the internet in the early 2000s, the focus on STEM (science, technology, engineering, and math) education intensified. The educational culture focused on teaching literacy skills and digital literacy, including 21st century digital citizenship skills. Students engaged in collaborative projects, creating digital content, and using technology to explore concepts and solve problems. Ultimately, the article highlights the importance of preparing students with digital skills and fostering their ability to be self-directed learners in an ever-evolving digital world. The digitalization of educational culture is essential to provide students with the necessary tools to thrive in today's society.*
Keyboards*: Educational Technology; Digital culture; Technological integration; Student-centered learning; School Leadership*

INTRODUCTION

Over the course of fifty years, we've gone from treating technology as a siloed novelty to seamlessly integrating a variety of edtech tools into our lessons. Technology originally made its way into the U.S. education system as a necessity to prepare for an increasingly digital future and as part of its Cold War-era competition. After witnessing the launch of Sputnik, the Soviet Union's first satellite, the United States shifted much of its attention in education to math and science, while embracing technology in particular. The Vocational Education Acts of the 1960s funded the use of technology in schools. As a result, students learned programming languages such as BASIC, and PCs gradually made their way into some classrooms.

Educators took approaches by incorporating digital culture into classroom instruction, the idea being to create student-centered learning activities that required hands-on exploration. The children learned the language commands that would create graphic shapes, based on instructional programs in a theory of constructivism that was termed "DIY," which is a strategy in which students assemble the building blocks of learning on their own. In the mid-1980s, Apple computers also gained a foothold in classrooms, and a more common approach to integrating educational digital culture, gained popularity. Teachers used edtech software solutions: Training students with electronic programs. Therefore, students were routinely assigned computer tasks, where students answered an endless series of questions based on knowledge and memory.

Just a decade later, the Internet connected computers around the world. The dramatic growth of the World Wide Web introduced email, video, and a variety of digital media. More importantly, it enabled two-way communication between anyone, anywhere, anytime. That connection revolutionized not only business and interpersonal relationships, but also education. In the early

2000s, there was an increased emphasis on a new form of education: STEM, short for science, technology, engineering, and math. However, educational culture and technology are the future; They were also able to adopt them because of all the benefits they bring to the classroom.

Digital culture in today's education

Because students need digital skills, today's educational technology has taken on an important role in many classrooms. The focus is less on instilling concepts in students' minds and more on teaching them important literacy skills and digital literacy. Educators and policymakers have come to a nexus of thought about what integrating digital literacy into classrooms looks like. The Student Standards now include creative innovation, the development of communication skills and collaborative work projects, engaging in the kind of critical thinking that results in problem-solving and decision-making, and the acquisition of 21st century digital citizenship skills. This is in addition to learning how to operate the hardware and software on the devices. The Skills Partnership for this Century sets out a similar vision for integrating digital culture into educational culture. Information, media, and technology skills are a vital component of empowering students in all communities. Technology partners with schools and communities to ensure that students around the world develop the mindset and skills needed to live and learn in a rapidly changing environment. Most teachers support these technology standards. They want to see their students taking technological initiatives and using digital tools for their own learning purposes. (Dussel, I. 2014) Therefore, students should use devices to interact with content in meaningful ways such as:

- Digital video creation and graphic media design to support concepts.
- Participate in live vlogs on a topic of study
- Using classroom surveys to hear different perspectives on issues.
- Development of collaborative projects between diverse teams.
- Collecting and interpreting data from a variety of online sources
- Experiment with virtual simulations that help explore material that would otherwise be inaccessible
- Technology in education is now more about integration than isolation.

No longer a topic addressed by routine "seat time", the integration of digital educational culture today is interactive and continuous. Using personal devices, students learn concepts, assess their progress, and continue to add important data to their knowledge and skills base. In a sense, students are assembling and building knowledge, as in a modern version of DIY.

The Future of Technology in Your Classroom

Unfortunately, not all classrooms have the same level of edtech integration. Adopting cutting-edge technology can be costly, and increasingly tight budgets determine what kind of technology integration is possible. It would be wonderful to happily hand each student a tablet and tell them to work with the device. But that's not feasible, it wouldn't even be effective: students need guidance when it comes to unfamiliar technology. And the need for guidance means that teachers themselves must be taught how to navigate (Dussel, I. 2014)

Using digital culture in education effectively

Technology integration teaches students the skills they will need, including creativity and innovation, collaboration, and communication. Above all, these integrated, interactive educational technology activities encourage students to take initiative and engage with the content in every class they take. Incorporating technology into the 21st century classroom is about creating an opportunity for students to be self-directed learners, now and beyond their formal education. The world influences the classroom through technology. You can influence how that technology will be used in your classroom by making interaction a priority (Peirone, F. 2018)

Digital transformation in education is happening at a phenomenal pace like never before in history. Today, the world is driven by technological advancements and is marked by critical global issues, making it crucial for educators to rethink the role of education. As the world faces myriad global challenges, educational institutions must be at the center of formulating solutions to help prospective students develop the life skills and competencies needed to thrive in an ever-changing environment. Simply put, what is taught and how it is taught will also evolve (Dussel, I. et al. 2018)

The widespread digitalization of all aspects of life, including the disruption caused by the internet and the invasion of artificial intelligence, requires rethinking the processes of educational digitalization. The broader purpose of digital inclusion in education is to develop an effective education system that fits the needs of the digital economy and ensures easy access and understanding for education stakeholders. A variety of technologies that are helping to change the face of education include telecommunications technologies that enable the creation of next-generation communication networks; artificial intelligence and big data processing technologies; cloud technologies; virtual and augmented reality; Internet of Things (IoT); and blockchain technologies.

Rapid digitalization has disrupted many aspects of life over the past ten years, and education is no exception. Teacher-centered instruction has a long and illustrious history in education. However, as students take more responsibility for their education and use technology to gain knowledge, the role of the teacher has shifted in many classrooms to one of advising and directing, as students take more responsibility for their education and do so. Around the world, schools and institutions are beginning to reassess their learning environments to support this new approach to education, encouraging greater contact and small group work, and employing technology as an enabler of knowledge. To ensure that students learn in a useful and relevant way today, the digitalization of educational culture and information and communication technology (ICT) are essential (Peirone, F. 2018)

External and internal imperatives that operate in the field of education in relation to the inclusion of digital technologies.

Culture as a concept is infamously difficult to characterize, but it is one of the most important concepts in education. (Peirone, F. 2018) suggest that school culture can be understood based on established, but unexpressed, assumptions, values, beliefs, practices, and actions. (Dussel, I. et al. 2018) agrees, stating that an organization's culture is the intrinsic core assumptions and beliefs held by its members. Thus, when you suggest that, until recently, the last technologies that had a surviving impact on schools were textbooks and the blackboard, it is immediately clear that for established norms and practices to change to incorporate digital technologies, a significant shift in that requires a specific school culture. Of course, there are immediate difficulties; Digital devices and technology are not culturally neutral. By their very nature, they modify traditional discourse and media as they influence social interactions in the classroom.

Therein lies the difficulty; A change in teaching style necessitated by a change in culture (due to the adoption of technology) involves the movement of those beliefs and assumptions of teachers that are often stable and resistant to change. Without such change, combined with cultural norms of satisfaction and comfort zone mentality, purchased technology may never come out of its box. In other words, higher levels of use are much more likely to occur when the perception of technological value is high and physical resources are low, rather than the other way around.

Barriers to cultural change

After establishing a collaborative vision, changing the culture, even in the most accommodating environments, is difficult to accomplish anything. (Reygadas, L. 2008) points out that teachers' individual philosophical beliefs are not easily modified, while a wide variety of teachers were not enthusiastic about the necessary changes in their pedagogical approach that were associated with the introduction of digital technologies into their everyday teaching. In fact, it is often the case that the more innovative an approach is seen, the more likely it is that teachers will be skeptical and see it as a fad or a potential threat. So how can school leaders combat these numerous challenges in their efforts to successfully embed a culture of using digital technology to enhance and enhance learning? (Reygadas, L. 2008) has distinguished the various obstacles into two categories that highlight the importance of teachers' internal characteristics; 'First-order barriers' are external and inexplicable to teachers, while 'second-order barriers' are internal and reflect personal beliefs and attitudes.

First order

Resources as a key variable: Teachers typically cite a lack of resources as a major factor in their struggles to adopt digital technology into their curriculum, including hardware, software, time, and

technical support. Any lack of access to relevant technological equipment is then used (albeit understandably) as a reason for the under-utilisation of classroom technology. In most schools, the overall school budget is managed by the senior leadership team. (Welschinger, N. 2020) expresses concern about the potential negative influence on technology adoption by budgeters who lack the knowledge or understanding to purchase the resources needed to progress. Therefore, school leaders who wish to adopt and integrate technology will need to ensure that sensible, well-planned finances are available. However, the literature indicates that even if many resources are purchased, the increased availability of digital hardware and software is not necessarily sufficient to foster classroom integration. Possessing digital technology does not guarantee effective integration; More important is the ability of teachers to know how to integrate it. School leaders who believe that by simply buying technology, their schools will suddenly witness mass integration will be sadly disappointed.

Time as a key variable: A valuable resource that doesn't break the bank is time, although it does represent another huge factor within this variable. During the Apple Classroom of Tomorrow project, researchers such as: (Welschinger, N. 2020); (Peirone, F. 2018); (Dussel, I. et al. 2018) concluded that it takes five to six years to integrate technology to the extent advocated by the constructivist (a view of learning in which people build their own understanding and knowledge by experiencing things and then reflecting on those experiences) reform efforts. Therefore, school leaders who wish to adopt technology should not expect an overnight solution and should be willing to allow time for a successful adoption process to take place.

Second order

Behavior modeling as a key variable: Teachers who see technology as a threat are more likely to adjust their normal practice to incorporate technology if a school leader can show them that it has advantages. For fundamental change to occur, leaders must successfully model the new practices they hope to replace the old ones. In fact, (Winocur, R.2009) suggests that it is imperative that school leaders consistently use digital technologies, read books about computers, participate in personal and professional development opportunities, attend technology conferences, join technology organizations, find experts to help them and give advice and take the necessary steps and the opportunity to visit and critique schools that have successfully integrated technology into their education plans. I am a student.

Teacher knowledge as a key variable: Teachers' knowledge has a great impact on their decisions in the classroom, therefore, it is imperative that school leaders help them to properly develop and improve their knowledge systems for the culture to develop successfully. Interestingly, (Peirone, F. 2018) established a framework that allowed the subsequent analysis of teacher knowledge by summarizing it in seven categories; pedagogical knowledge, content knowledge, knowledge of classroom management strategies, curricular knowledge, student knowledge, context knowledge, and knowledge about educational goals and beliefs. Three decades later, it is clear that knowledge of digital technology has emerged as a potential eighth category. However, it's not as simple as a teacher knowing how to turn on an interactive whiteboard or using an iPad. For example, teachers who wish to adopt technology efficiently in their pedagogical approach must be able to redesign the curriculum, manage software and hardware, and determine which technologies or applications enable successful integration and enhanced learning.

Teachers' beliefs as a key variable: Teachers' beliefs and, in some cases, innate resistance to change, is therefore another factor that could negatively affect a positive deviation in culture. In fact, the research of (Dussel, I. 2014); (Peirone, F. 2018) found that teachers with student-centered pedagogical beliefs were generally better at integrating technology, while those with more traditional beliefs faced much greater challenges in doing so. In addition, their observations saw that teachers with predominantly traditional beliefs generally implement less sophisticated technology use, while those with constructivist beliefs implement a more student-centered pedagogical approach to technology integration.

However, (Thomas, H. et al 2013) noted inconsistencies between teachers' beliefs and what materializes in their classrooms. He goes on to suggest that contextual factors actually hindered teachers' ability to routinely manage their beliefs in their classrooms. This means that there could

be potential for school leaders to develop the groundwork for change, when teachers hold constructivist beliefs, through the establishment of a culture of innovation. However, school leaders should also be fully aware that teachers' beliefs are rarely fully revised. Therefore, over time, they become deeply personal, deeply ingrained, and extremely resistant to change.

Self-efficacy as a key variable: Without self-efficacy, both knowledge and belief in technology are insufficient to facilitate students' learning (Thomas, H. et al 2013) describes self-efficacy as the belief in one's own ability to organize and carry out the course of action required to produce results. Therefore, leaders must devote time and effort to increasing teachers' confidence to use technology, beyond administrative tasks, to achieve and meet student learning goals. One of the best options available to school leaders is to facilitate positive experiences for teachers, with digital technology, within the context of their classroom. Successful personal experiences in which the potential of technology in the classroom is clearly articulated are more likely to build trust with teachers. In other words, the variable of modeling good practices with technology can improve self-efficacy.

Events in recent decades to make the digital divide a problem that States must address and act on

The growing demand for future leaders to face global challenges, such as the lack of optimal access to education, poor digital literacy, and the malaise caused by the poor assimilation of the digitized culture of high command of nations, demands a renewed collective vision of education that must be based on the principles of collaboration, civility, unity, and creative thinking; To solve complex problems on a global scale, students must become self-directed learners. By giving them the right tools, it will allow them to safely explore the world around them. Educational institutions are the best place to hone these skills and competencies. They are seen as powerful institutions that society trusts to help students adopt the global mindset and competencies needed to thrive in the future.

Imperative to driving any change in school culture is the role of leadership. Much of the responsibility for advancing digital culture remains in the hands of school leaders, as they are the ones who have the ability to determine cultural norms and values and decide which technologies correlate with them. In fact, (Thomas, H. et al 2013). describes school leaders as "culture founders," who are ultimately responsible for changing culture by introducing new values and beliefs, while (Welschinger, N. 2020) argues that perhaps "the only thing of real importance that leaders do is create and manage culture."

Sharing a vision; A good starting point for an effective school leader who wants to integrate technology within a school's culture is to make sure they have a clear vision of the role of educational technology in their context. Successful school leaders must facilitate the development and agreement of visions that encapsulate best practices regarding teaching and learning. In fact, (Thomas, H. et al 2013); (Dussel, I. et al. 2018) investigated a number of education systems around the world to determine which factors presaged steadily improvements. They found that nearly all of the school leaders they asked confirmed that setting both vision and direction were among the most significant attributes of their success. However, for the vision to be successfully realized, an effective school leader must ensure that it is established in conjunction with teachers and even other members of the school community. Unless leaders share the school's vision formation about how (and why) technology will improve both teaching and learning, teachers may not be motivated to integrate it into their pedagogical approach.

In conclusion, knowledge of first-order barriers will help school leaders address the lack of technological self-efficacy and educational digital culturalization. For example, giving teachers enough time to learn about technology and begin to enjoy successful experiences with it are strategies that school leaders could engage with. In addition, working alongside knowledgeable colleagues or encouraging staff to join professional learning communities could also help leaders improve their colleagues' digital culture in classrooms. In addition, school leaders must develop a culture of learning, in which teachers know that professional development opportunities will help improve their practice, skills, and knowledge. Teachers need to be able to tailor their professional development to have a direct impact on their own practice. And to have the opportunity to take responsibility for pedagogical improvement. When successfully adopting new technologies or

strategies, they should become an everyday part of teachers' repertoire with tangible results and positive impact in their classrooms. In fact, if a school leader can increase confidence, offer positive experiences for teachers to improve their skills, knowledge, and understanding, they are more likely to establish self-effective behavior. However, like teachers' knowledge and beliefs, self-efficacy alone is not enough to ensure that technology is adopted in schools appropriately.

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