DIGITAL GENERATION IMPACT ON THE LANDSCAPE OF MODERN PEDAGOGY

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ABSTRACT

Byron Janis, a world-renowned pianist, captured the essence of pedagogy defining its main purpose in terms of students having to learn how to “create vs. imitate”. The educational process is at the core of human experience. Teachers are main pillars of education, broadening students’ horizons while encouraging their creative and critical minds, ensuring that education provides individuals with innovative and analytical capabilities to tackle the ever-changing job market. Pedagogues of the past were both leaders and guardians of their students, providing a moral guidance on top of the learning process while enriching the lives of their students and reflecting on their own as part of the process. This interdependent relationship created an approach to pedagogy “as the art and science (and maybe even craft) of teaching”. For centuries a teacher as a leader, guided and provided a moral compass that allowed students to be observers of the learning process, assigning them almost a passive role of the “knowledge recipient”. However, with the rise of the digital generation, concepts such as Prensky’s digital native” versus “digital immigrant” create a new paradigm within pedagogy as changes of learning landscape are taking place, with learners taking a more independent, active, self-driven approach while taking ultimate ownership of the learning process.

Authors see the opportunity for educators to rethink their approaches as they eagerly adopt or are forced to adapt to the changing educational arena, addressing the needs and demands of the digital generation whose educational approaches, mindset, perception of values of learning process, and core pace of the process are drastically different from those of traditional learners of prior decades.

This article describes ongoing exploratory research of different approaches to pedagogy addressing the needs of digital generation as teachers address the challenges and opportunities of changing student demographics, carrying the burden of focusing on content applicable and relevant to the current marketplace while adjusting to rapid technological changes impacting content delivery.

This study will focus on the following four questions:

Which variables impact changes within pedagogy landscape?
How is technology changing pedagogy?
How much does the burden of real-world applicability impact the educational process?
How can teachers be in tune with the needs and expectations of the digital generation?

KEYWORDS: Digital generation, Educational process, E-learning real-world applicability, Modern pedagogy, Online learning adaptability, Traditional pedagogy

VARIABLES IMPACTING CHANGES WITHIN PEDAGOGY LANDSCAPE

There are many variables that impact changes within the pedagogical landscape. Some of the most commonly cited issues include instructor behavior, students’ prior learning, motivation and
goals, metacognition, and diversity of students (Husbands, Pierce, 2012). Instructors’ behaviors are based on everything from their belief system to government involvement. Different types of school may have different requirements that may impact what educators can do in class (Wager, 2012). As technology shifts, new ideas influence instructors’ perceptions. Students’ beliefs and prior learning may also impact learning (Lewis, Smith, 1993). Instructors may have to consider the foundation on which students base their belief systems. Their motivation to achieve goals may also be rooted in their experiences. For higher order thinking to occur, educators might consider different approaches than those used in the past (Richland, Simms, 2015). Instructors should also consider that students are more diverse and may require unique processes to incorporate their cultural expectations. It is important to explore opportunities and challenges presented to educators and ways to ensure students receive the most effective learning experience.

**Instructor Behavior**

Instructors’ behaviors are based on their knowledge and beliefs; however, there may be outside issues that may also impact what instructors can do in class. Factors like government involvement may have an impact on behavior. Grimmitt (2000) explained the importance of government and how the national curriculum has impacted education theories due to a lack of identifying education principles. Teachers can feel disempowered due to demands on their time to meet testing requirements (Grant, Hill, 2006; Cole, Bloom, Kowalske, 2016). Instructors in public schools could fear creating changes that might not generate positive test results. Cole, Bloom, and Kowalske (2016) found that simply telling them how to change things may not be successful if they rely on their experience. Charter schools may use different models of pedagogy, which may not be available to public schools (Wager, 2012; Zhao, 2012). Instructors may rely on continued professional development to keep up with the latest practices; however, the results have not always been positive (Opfer, Pedder, 2011).

Instructors have utilized different classroom instruction techniques to keep up with changing technologies and beliefs. Doyle (2016) found that it may be challenging for instructors to create work that allows students to be challenged in a way that allows spontaneity, insight, and flow. Changes include classroom flipping and incorporating sustainability techniques. “Flipped classroom methods rely on students engaging with instructional content before coming into the classroom, where they then have the opportunity to interact with the material in a hands-on fashion; in this context, instructors participate as guides through the exploration process, rather than as lecturers” (Rivera, 2015). Classroom flipping has been effective. Success may depend upon instructor how much instructors buy into the process (Rodriguez, 2016). Incorporating concepts that improve sustainability can be important for student outcomes. Hurney, Nash, Hartman, and Brantmeier (2016) found that “faculty perceived that sustainability content enhanced their course redesign by providing real-world relevance, awareness, and engagement” (p. 582).

**Motivation and Goals**

Learning includes creating a vision for intended outcomes. These outcomes can be thought of like goals. James and Pollard (2011) argued that instructors should question the result of achieving those goals. This process may include considering issues like what someone of a specific age must know to be successful in the future workplace. Their goals might also be linked to self-control as well as meta-cognitive control (Pintrich, De Groot, 1990). Lewis and Smith (1993) found that “students develop both individual and contextual goals, as well as strategies, to self-regulate in a pedagogical culture” (p. 239). Goals may include things such as mastery, performance and avoidance issues. Educators should understand the importance of students’ goals because they play a part in students’ reasoning for how they approach tasks and why the might avoid performing those tasks (Pintrich, Schunk, 1996). Järvelä and Salovaara (2006) explained, “Mastery-oriented students are more active learners, they prefer autonomy and they are not afraid of facing challenging tasks; as a consequence, they engage in more demanding educational practices than students with low mastery orientation” (p. 233). Motivation in American schools are impacted by how much teaching and play takes place in the classroom. Banfield and Wilkerson (2014) found that including gamification as a form of ELT improved motivation and self-efficacy. There are enough commercially-available games that instructors should be able to incorporate them into curriculum design. By making classrooms more student-centric, gamification may improve student motivation and learning outcomes (Banfield, Wilkerson, 2014). Some students may find that having control over their learning improves their sense of motivation. Marin and Boruchovitch (2014) explained, “Self-regulated learning is the process by which students plan, monitor and regulate their learning” (p. 323). Intrinsic motivation can be improved through regulation of behavior, which is important because “under the influence of intrinsic motivation, the engagement and proactive attitude of the student does not depend on the presence of another person, for example, the teacher, as there is satisfaction in performing the activity itself” (Bzuneck, 2005; Zimmerman, 2006).
Meta-Cognition and Higher Order Thinking

Part of having an awareness of one’s thinking includes higher order thinking. While the importance of higher order thinking is predominant in the literature, there is no universal definition of it (Lewis, Smith, 1993). Higher order thinking assumes some learning involves more cognitive processing. Some might consider this as the ability to reason rather than memorize facts (Richland, Simms, 2015). This type of thinking may differ from what instructors might consider traditional thinking in courses that involve math, history, or science because students develop skills that may prove important for future employment (Husbands and Pierce, 2012). Stokes (2007) explained that “few teacher’s questions demand higher order thinking” (p.7). It may be important for instructors to consider different types of learning including utilizing analogy. For the use of analogy to be successful, it is important for students to feel engaged, draw inferences, but not overly tax cognitive resources (Richland, Simms, 2015). Instructors use Bloom’s taxonomy to create objectives. As part of this process, it can be important to focus on utilizing techniques such as open-ended questions to stimulate learning. This more interactive approach differs from the traditional question and answers technique if it is used to relate examples from across different curriculum (Alexander, 2001). It is important also to have projects that are creative and meaningful to students. By incorporating creative projects, students engage in mental activities that allow the flow of a student’s thought process (Doyle, 2016).

Diversity of Students

Students have become more diverse as the population of the United States becomes diverse. Although our population has changed, our education system is primarily rooted from the norms of several centuries ago (Bodinet, 2016). Nelson Mandela stated: “Education is the most powerful weapon which you can use to change the world”. Therefore, having acceptance of the diversity of the kind of education required throughout the world can be important. Although some teachers may find it challenging to meet diverse needs, it may be important for them to embrace differences. Elkader (2016) found that it helped if teachers opened a dialogue to improve their worldview. As some students find difficulty with assignments, it may be important to utilize different techniques alongside traditional approaches to improving overall participation in class (Florian, Linklater, 2010). For students to feel there is a sense of education equity, it is important that instructors align their instruction and practices with students’ beliefs (Banks, 2012). Recognizing beliefs can be especially important to teach children in urban areas (Garmon, 2004). To ensure students can utilize critical thinking that aligns their cultural backgrounds it can be important to have a dialogue that allows students to consider curriculum what they believe is true based on their culture and upbringing (Elkader, 2016). That is not to assume that all learning should be lecture-based. Scott (2015) found that lectures may not be as effective as active styles of learning. It may be important to let students tap into their creativity. Stokes (2007) found that instructors sometimes limit creativity inadvertently through constraints. Therefore, it may be important for instructors to be aware of anything they might do that could inhibit natural creativity.

The Burden of Creating Effective Course Design and Instructor Delivery

Educators have to concern themselves closely with how they build their programs and courses to ensure real-world applicability. Quality Matters, students rubrics and standards program is the gold standard for online courses, programs, and quality. Quality Matters share two important components for successful online education, which are design and delivery. Our experience tells us in both design and delivery; we need to be innovative and constantly learn new ideas, technologies, and ways of doing things. This way we stay current, and we become more effective and efficient. Ragan and Anderson explained (2010), “Curriculum reform is one of the hottest topics in scientific institutions of learning across the globe” (p.1). Our experience also tells us we need to unlearn some of the part ways of doing things that might have worked well for us in the past, but maybe are not as effective today.

Today, educators now have an increased burden placed on them to innovate and adjust their programs and courses constantly. Being proactive and scanning their fields of expertise, recognizing trends, listening and learning, and then forecasting and planning desired curriculum changes and goals. Being proactive transformational leaders, along with adaptability, flexibility, and innovation are keys to success as educators design and deliver in online programs and courses. Educators are leaders, and they must understand the changing pedagogy landscape. They will need to deeply understand their adult learners’ needs and wants, learning styles and work toward a path that furthers student learning and teaching effectiveness in the online classroom. It is all part of a goal of providing the very best classroom experience possible. Effective leaders understand the context and culture in leadership situations (Weiss, 2015). As variables in the pedagogy landscape and higher education systems and cultures change fast, we must be aware and understand these trends and changes, and most importantly, what is working and effective and what is not. This is an important component for furthering student success.

The Burden of Dealing with Change as Educators Bridge the Gap Between Theory and Practice - Leveraging Technology for Real World Application

Change forces that drive organizational change are internal and external. External forces such as technology, political, economic, government, and social changes can force organizations to implement change. According to Davis (2012), “The three most common types of organizational change are developmental, transitional and transformational (Weiss, 2012). Developmental change is fine tuning of what already exists and is less stressful. Think of it as a small-scale change that can be used to improve a product, process, procedure. Transitional change can be more intrusive and involves incremental adjustments. It is a larger scale change. This change can be more stressful, involve several departments, people, and systems as incremental adjustments are made over time” (para 4).

Today, the burden is on educators to understand what teaching technologies to use and design into their courses and programs. Technology is the number one driver of change (Weiss, 2012).
Today, technology is driving change in the classroom (Ivy, Davis, 2015). As technology and variables change the pedagogy landscape, educators are constantly adapting, and these new technologies and shifts force innovation and new ideas and ways of doing things are influencing educators. Students’ beliefs and prior learning may also impact learning (Lewis, Smith, 1993). For higher order thinking to occur, educators might consider different approaches than those used in the past (Richland, Simms, 2015).

Educators are faced with the burden to learn how to integrate real-world learning experiences into their classrooms. They have to consider different approaches and technologies as they want to stay current and not use outdated technology. One form of technology is the use of video and how to boost their instructor presence by integrating into real-world learning experiences into the online classroom through the use of video (Ivy, Davis, 2015). According to the presentation made by Ivy and Davis (2015, slide 7) in the Ashford Teaching and Learning Conference, the following are benefits of using video: “Enhances Knowledge Transfer. An important question for faculty to consider centers on what video brings to the assignment that writing would not”.

Grabs Attention: Video is great at grabbing users’ attention. If a video is available, 60% of visitors will opt to watch it before reading any text. Effective Delivery: Video helps convey factors that text cannot, such as emotion and personality, and also speeds up the explanation of visual concepts.

Content Recall: Studies show that “users recall nine times more information from video than from text” (Rusted and Coltheart, 1979). It is important to remember, “If a video contains required content that a student must use for an assignment or discussion posting, it is correlated with higher view numbers” (Ivy, Davis, 2015).

As the use of video and other technologies increase, another burden on educators is to increase their understanding of effective classroom management in the online teaching modality. For example, how to skillfully select the right videos that include content related to the assignment. Being creative and marketing them of the course will draw favorable attention to them. Educators need to know how to skillfully use announcements, images, and place efficient and effective reminders informing, persuading, and reminding their students that these videos are available for use, and reminding them of the value they deliver (Ivy, Davis, 2015). Introducing the videos and real-world applications, are important components for learners that can further real-world applicability and student success.

### The Burden Having a Complete and Thorough Understanding of Logistics and Time Management – Important Components

In professions such as the nursing profession, many important concerns were cited when the application is taken outside of the online or on-ground classroom. A study in Kenya of a nursing college points out many logistical concerns. Challenges such as creating the right class size, avoiding class overload, and securing, communicating and educating human resources which are involved in assisting students in the real-world application. In the study conducted by Waweru, Mapesa, and Nyangema (2012), “BScN students (85%) said that nurse supervisors did not demonstrate an understanding of nursing students’ clinical learning objectives during clinical practice. However, from the demographic data, only 12.5% (n=1) of the nursing supervisors was DIGITAL UNIVERSITIES International Best Practices and Applications V.4 - N.3
Connectivism is a theory used for the digital age. The theory describes a learning environment in which students are encouraged to collaborate (Collaborative Learning Theory) to solve problems, discuss new ideas, or acquire new knowledge. Collaborative Learning theory is opposite of traditional learning whereby a student is seen as being passive, isolated learners. Collaborative learning involves the mutual engagement of learners working together to solve a problem or working together on learning tasks.

**The Influence of Participatory Technologies on Pedagogy**

Using participatory technologies (PT) in higher education has the potential to create a learner-centered environment. According to Mcloughlin and Lee (2008) an increase in learner autonomy will give students a greater sense of responsibility for their own learning. Increasing learner autonomy has also shown to improve student achievement. PT also supports the student’s autonomy by allowing the student his or her own personal space within a larger community for building knowledge. The student’s ability to reflect and then engage in conversation with his or her peers allows for negotiation and knowledge creation in a wider community that is engaged in reflective practice.

In addition to creating a learner-centered environment, PT also creates an online social presence. Instead of isolation, the student has a sense of belonging to a community. According to Hughes (2009) this sense of belonging has shown the capacity to increase learner persistence and achievement. Having an online social presence allows the student to share his or her work with the entire class and beyond the class walls. The teaching is no longer focused on the instructor as students can learn from external sources and knowledge networks. The ability to share this information and learn from external sources and knowledge networks has provided students to become both consumers and producers of information. This approach has altered the way in which authority is conferred in the classroom. PT has also provided instructors access to methods which can enhance reflective and dialogical learning. This further increases student autonomy and helps create classroom learning communities.

PT also creates stringent challenges as to how the abundance of information is used and how the information can be evaluated. For the instructor, this has made it more difficult to teach. For the student, it has created a need for high-level critical thinking skills. This combination has made teaching in higher education more difficult. However, with the rise of Web 2.0 and the future development of Web 3.0, instructors can take full advantage of existing technologies to improve student learning.

Originally, the Internet focused on viewing information. With the advent of Web 2.0, the one viewing the information can also become an active participant through collaboration and interaction. Information, in addition to being viewed, can be shared and written. At the center of Web 2.0 technologies is a culture of continual interaction, communication, and sharing of content. Web 2.0 has been a disruptive force in education. Users are both consumer and producers of information. Participatory technologies have challenged traditional ideas about authority. Trust and credibility are conferred differently on the web, through a track record of positive contribution rather than one’s affiliations. Learning is no longer just a classroom event and the lines between learning, work, and recreation are becoming increasingly blurred. Learning is open, networked, and always happening. Higher education teaching is still largely focused on the transmission of knowledge from instructor to student. Even online education replicates the models which focuses on faculty content delivery rather than student participation.

**The Need for 2.0 Pedagogy**

PT are being used in all areas of education. Hundreds of articles exist in the form of blogs, wikis, YouTube, Twitter, Facebook, and other social media that enhances the learning experience. The instructor must be able and willing to create an environment where collaboration can be used to create a positive learning experience. However, PT and Pedagogy 2.0 are not transformative in and of themselves. If the classroom structure is still using a hierarchical model, true collaboration will not take place.

**Features of Pedagogy 2.0**

The benefits of PT can be unlocked by Pedagogy 2.0. The focus here is to create a learning community where students contributes to and negates a collective understanding of a particular topic. This changes the role of the student and the instructor. The student is no longer asked to memorize information and regurgitate what they have memorized. With Pedagogy 2.0 the student has the opportunity to personally reflect on the topic and apply it through problem-based experiential learning. Pedagogy 2.0 changes the role of the instructor. The instructor now becomes responsible for creating a positive learning environment for the students. The instructor can do this by exerting control when appropriate, or allowing the students to engage in a free flow of ideas. When appropriate, the instructor can step in and offer differing viewpoints, taking on the role of a moderator in an online community rather than a traditional instructor.

**Limitations of Pedagogy 2.0**

Literature is filled with examples of failed experiments with PT in the classroom. Instructors can embrace PT in the classroom but that does ensure the students will use the tools for academic work. Some may not want to use the PT in the classroom because they see them as tools designed for their personal life. Often, the learning curve for using the PT is so steep that learning how to use them takes away from learning (Ruth, Houghton, 2009). It is not automatic, however, that vibrant dialogue will take place, even with the use of blogs and wikis in the classroom setting. The stage must be properly set to encourage students to participate in the learning community. Failure to gain student participation will not take place and the student and instructor will often revert to the
acquainted lecture-based learning experience where learning materials are provided by the
instructor to the student. Previous assumptions that students have about the instructor’s role will
still dominate student thought and action (Dohn, 2009).

**Information Literacy and Pedagogy 2.0**

Both instructors and students need to adapt to a new approach to teaching and learning. Students will have to develop new literacies to be successful in the 2.0 classroom and in the 2.0
world. What is taught about information literacy and what it means to be information literate will
have to change to better match the current social, educational, and technological environment.
The student will need to develop both social and technical skills that will help the student connect
with sources of information. Through the use of Pedagogy 2.0, there will be a flattening of the
classroom hierarchy between students and instructor.

**Conclusion**

Decisions about technology and higher education are, ultimately, academic decisions. These
decisions have an impact on valued and respected practices and interactions at the local campus.
The past decade and a half has seen the emergence of an environment in which people learn
change significantly. The Internet has made it possible to access information at the point of
need creating an environment where having the ability to find information is more important that
master of knowledge in any one area. What is needed to be considered “informed” has created
learning as a life-long endeavor. The Internet with Web 2.0 and Pedagogy 2.0, has opened a world
where learning extends beyond the formal classroom and one that offers people opportunities to
develop their own personal learning environment. The authors of the article described different
approaches to pedagogy addressing the disparity and correlation between the generation of
digital learners and teachers who are addressing the opportunities and challenges of teaching
within the digital framework.


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