The Impact of Technology: Should educators adapt to accommodate the Net Generation of learners?

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Abstract

As the education system evolves to become more technology inclusive, there is a growing concern about the implications of digital technology on student learning. Proponents of the digital natives idea have argued that the current education is not equipped to support the needs of the digital natives. These arguments have placed an immense amount of pressure on educators to change to provide 21st century students with a quality education based on 21st century standards. This paper analyses and consults a variety of existing literature participating in this debate. This was done by paper presenting and questioning the main claims made about digital natives to analyze the position of young people in relation to new technologies. This paper argues that rather than being profoundly disengaged, students have a limited understanding of how technology can be used to support their learning. The general findings of this paper suggest that students need more training with technology fully understand the potential of technology to support learning.

The Impact of Technology: Should educators adapt to accommodate the Net Generation of learners?

In today's classroom, it is no secret that technology is becoming a more prominent form of learning. As technology is becoming increasingly prevalent in classrooms, there is a growing concern about the implications of digital technology on student learning. Digital natives' literature has put forward the view that students are disengaged and dissatisfied with the current education system. While there are many positive and negative aspects of technology use in the classroom, numerous studies have supported the idea that overall student motivation and engagement in learning is enhanced by the implementation of instructional technology (Carstens et al., 2021). This paper will argue that rather than being profoundly disengaged, students have a limited understanding of how technology can be used to support their learning. For technology to play a greater role in student learning, students must first understand the relevance of such technology to their education.

This paper recognizes that young people are surrounded by an environment infused with a variety of digital technologies. However, a general exposure to digital technologies cannot be used to analyze the position of young people in relation to new technologies. In order to determine the factors that are influencing students' attitudes and capabilities with technology, it is crucial to observe how these technologies are being used in their studies.

Commentators have argued that as technology is becoming ubiquitous in the field of education, the current education system is not equipped to support the needs of the digital natives. One of the main assumptions fueling these claims is that the digital natives possess exceptional technical expertise because of their exposure to technology. Yet, it is these claims

have been the driving force behind the pressing calls for education reform. Many researchers, including Bennett et al. (2010), have argued that although calls for radical transformations in education may be legitimate, it would be misleading to ground the arguments for such change in students' shifting patterns of learning and technology use. For Jones and Healing (2010), the picture is more complex than the simplistic equation of exposure to new technologies and a generational change of attitudes and capacities as proclaimed by digital natives' proponents.

Moreover, the arguments put forward by digital natives' proponents have subjected educators to great deal of pressure to provide 21st century students with a quality education based on 21st century standards. For many years, researchers and educators have shifted their attention to debating whether teachers should change the classroom to meet the needs of a technology-focused generation. Very little emphasis has been placed on the students themselves and whether they are able to utilize these tools to benefit their learning. There is very little research scrutinizing students and their ability to solve technology related issues. According to Bennett et al. (2010), much of the current debate resembles a form of 'academic moral panic' where ''the divides established by commentators serve to close down debate and in doing so allow unevidenced claims to proliferate" (p. 783). Consequently, the authors assert that "not only does this limit the possibility for understanding the phenomenon, but it may also alienate the very people being urged to change" (p. 783).

One of the most valuable contributions of technology in the classroom is how it affects students' attitudes toward learning. Despite technology becoming common place in a majority of today's educational institutions, there is however a clear difference between students' expected learning method and their perceived level of information and communications technology (ICT) skills. Students' approach to learning appears to be based on their perception

of what a task requires and their previous success with a particular approach (Bennett et al., 2010). This observation suggest that students are not clamoring for greater use of emerging technology but, rather students' choices with technology are shaped by contextual factors such as teaching approaches and course requirements. As noted by Margaryan et al. (2011), there is "a deficit of learning literacies and a dependency on guidance from lecturers amongst students. Conventional forms of teaching appear to encourage students to passively consume information" (p. 439). While these findings reject the infamous notion of profound disengagement and dissatisfaction among students, it raises concerns that students may not be motivated to transfer their skills to different settings. Furthermore, additional research conducted by Littlejohn et al. (2011) supports the view that students may not fully understand how ICT and formal learning can work together outside an educational context. Similar to Bennett et al. (2010), this paper contends that the education system has a vitally important role in fostering information literacies that will support learning.

A common misconception in this debate is the level of confidence with technology that is often ascribed to young people. This aspect is often overlooked because it is believed that student's familiarity with technology leads to an increased ability to utilize them (Palfrey & Gasser, 2008, as cited in Jones and Healing, 2010). Drawing on the student perception, Jones and Healing (2010) discovered that a majority of students entering university reported initial surprise or confusion at the array of technologies that were available and few thought this led to long-term difficulties. The same article proceeds to outline that "students have a relatively superficial understanding of new technology even though they have had a wide exposure to it" (p. 352). This furthermore conveys the idea that students are unable to utilize these tools to benefit their learning because they have very little to no understanding of them. While the picture might not

be very clear, the staff perspective from Jones and Healings' (2010) article confirms that, although students had surface familiarity with a variety of computer applications, they were lacking when it came to specialized pieces of software. This signals for the reevaluation of the views associated with young people and their ability to problem solve technology related issues.

The successful implementation of digital technology in the classroom is inhibited by many factors. One such barrier is the implications of the arguments put forward by digital natives' proponents. Since students are expected to have advanced technological skills, very little effort is geared towards familiarizing them with new technological tools. According to Carstens et al. (2021), "Educators also felt that students need more training with the provided technology to help promote more independence" (p. 112). This lack of training places students at a disadvantage in their learning as instructors must now reallocate the designated time for delivering content to teaching students digital competencies. This is not to say that that young people are digitally illiterate but rather "their understanding of how to use these tools for learning is limited by their knowledge of the potential affordances and applications of these tools and by their narrow expectations of learning in higher education" (Margaryan et al. 2001, p. 431). Knowing all this, digital literature has continuously placed immense pressure on educators to change to accommodate the supposed needs of the new generation of students. Although educators may need more technological training, both students and educators must be on one accord to allow technology to play a greater role in the classroom.

This paper examines how students utilize digital technology in their studies to explain why students have a limited understanding of what tools they could adopt and how to support their own learning. The findings suggest that students need more training with technology to fully understand the potential of technology to support learning. A general exposure to

technology is inadequate to evaluate the position of young people in relation to new technologies. This paper therefore conclude that it is not the case that students are disengaged and dissatisfied with the current education system rather they have very little understanding of the relevance of technology to their education. Thereby, the education system has a vitally important role in fostering information literacies that will support learning.

While this paper contributes to and expands on existing literature, the findings presented require further research and investigation. This paper has some limitations that one must consider when interpreting the findings. Firstly, most of the literature in this paper are nearly over a decade old and a lot may have changed regarding digital education especially due to the forced transition to virtual learning because of the Covid-19 pandemic. Secondly, there may be additional factors other than skills and contextual factors that are influencing young people's responses to digital technology. With that said, future research on students' use of technologies for learning could take into consideration a broader range of factors such as age and subject discipline and socio-economic circumstances. Despite these limitations, this paper highlights an avenue of this debate which very little attention is paid to. Furthermore, this paper petitions that decisions surrounding the use of technologies for learning should not only rest on students' preferences and current practices, but they must extend to include those that facilitate learning in the classroom.

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