

Impact of Technology Policy in the Higher Education Classroom: Emerging Trends

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Abstract

With the constant evolution of technology, there has been a growing use of electronic devices in postsecondary classrooms, by students and educators, over the last several decades. A recent publication by Becker (2013) highlights potential issues with students utilizing a variety of electronic devices in higher education and the implications for classroom policy on the use of this technology. This paper examines the issue from educators' perspectives and discusses current trends in educational policy pertaining to the use of electronic devices in postsecondary classrooms. The authors bring to light reflections on implications for policy advances on the use of electronic devices by educators in higher education.

Introduction

Over the last several decades, the digital medium has become prominent in higher education. With this prominence, there is an increasing expectation that educators utilize, and even embrace, technology in order to enhance the delivery of course content in keeping current with societal and future workforce demands (Blake, 2013). This occurrence has led to the creation and revision of policies that must consider the increasing presence of electronic devices as well as the use of these devices by educators who strive to remain in touch with their students' realities in a digital world.

Most higher education institutions have developed policies, with varying related nomenclature, that pertain to the acceptable use of electronic devices. The focus of these policies commonly ranges from acceptable use of social media (Facebook, Twitter, Tumblr, Desire MySpace, or of the institution's preferred social media forum), to acceptable use of information technology (smartphones, tablets, laptops, online mail and internet browsing), and also includes computing practice, and use of institutional computers. These policies are typically geared towards all members of the college/university community. This paper examines broader institutional policies that focus on the use of technology, highlights reflections in regards to factors that could impact the nature and quality of course content delivery for educators, and proposes implications for technology policy development in higher education. As a result, the recent work of Becker (2013), who studied the policy implications of student access to technology, will be examined from the alternate viewpoint of educators. The authors of the current paper have used extant

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research, a range of higher education use of technology policies, and reflections from their collective years of higher education teaching experiences in nursing and education, as a basis.

Advantages and Limitations of Educator use of Technology

There is a seemingly endless supply of possible technologies that could be used in the higher education classroom. Table 1 (below) represents some examples of general types of technology that were widely represented in the literature.

Table 1. Sample Technologies Commonly Utilized in Higher Education Classrooms

Type of Technology	Common Uses
Laptops and Tablets (hardware)	Research of course concepts/materials Access productivity tools and courseware Facilitate drill and practice to reinforce course concepts Communication and interaction out of the classroom setting
Audience Response Devices (Clickers) (hardware)	Permit groups of students to respond to one question Management tool for promoting student participation in large groups
Virtual Learning Environment Systems (ex. WebCT, Desire2Learn) (software)	Commonly used for online teaching and learning Store course content for student access Electronic forum for assignment submission Synchronous or asynchronous online discussion
Interactive Whiteboards (hardware)	Whole-class access to electronic content Manoeuvring of electronic content on interactive board

While there are evident perceivable advantages to using technology in courses, research has shown conflicting reports of the benefits and limitations of educators using these devices in a traditional classroom environment (Blake, 2013; Kirkup & Kirkwood, 2007). One of the more common benefits identified in the literature is the fact that the use of information technology as an instructional medium could be convenient and complementary to instructional practices (Hennessy, Ruthven & Brindley, 2005). Technology is also commonly used by students as an accommodation to bridge a learning gap. Some researchers maintain, as such, that the use of technology by educators could potentially enhance student learning (Blake, 2013; Livingstone, 2011). A broader advantage for students of being exposed to instructional strategies that employ technology is that this exposure during postsecondary studies could initiate them to different modes of technology that they may face in the workforce. This may in turn help them meet workforce demands and societal aspirations that are continuously evolving. Blake (2013) further

indicates that technology brings a new dimension to classroom interactions, and allows students to autonomously search for meaning within their courses. This indication suggests that the learning environment subsequently becomes increasingly student-centered, which develops self-sufficiency and agency in the classroom. These skills could also be desirable for future employers. Ultimately, Facer (2012) postulates that socio-technical change operated in classrooms inherently generates political discourse for further socio-technical change, as this has become the usual way that students learn.

The literature also identifies certain limitations of the use of technology by educators. Blake (2013) cautions that technology must not be perceived, in essence, as a universal solution to challenges faced in course delivery by educators. He specifies that they must properly “harness” the technology, especially given that research has shown technology has gradually become a preferred tool for social interaction (Becker, 2013; Facer, 2012). In contrast, excessive reliance on technology could become a hindrance in that the educator may have difficulty improvising course material delivery in the case of a technological failure. Livingstone (2011) indicates that empirical research that technology actually improves learning outcomes is limited. These authors question whether society truly requires “technologically mediated” student-teacher interactions. This perception is echoed by Kirkup and Kirkwood (2007). On a practical level, Mumtaz (2000) notes challenges such as the accessibility of technological resources, the ease of use of these resources, the institutional perception of technology, existing policies on acceptable use of classroom technology, as well as the educators’ level of technological training. Equity in the use of technology as a student accommodation is another potentially challenging issue. Based on the literature, it is evident that further research is warranted on the impact of technology on educational outcomes.

Summarizing these advantages and limitations allows for a critical analysis of notable elements that an ideal policy on the use of technology in higher education should consider. Research has shown that policy relating to the use of technology has not only become increasingly prominent in higher education, but is frequently an agent for institutional and pedagogical change (de Freitas & Oliver, 2006). This fact underscores the importance of having a detailed yet broadly formulated policy that allows for educators and students to reap the benefits afforded by the use of technology in the classroom. In this regard, Selwyn (2007) cautions that policy is, at times, too rigidly and inflexibly formulated, which limits the potential empowerment of technology promoted by educational technologists. Evans and Nation (2006) note that there is an immense stock of knowledge that is globally accessible through technology, and that policymakers should consider the diversity of experience that it potentially makes available. This affirmation is echoed by Robinson (2006).

Educational Trends that Impact the Use of Technology in the Classroom

In review of the literature, the advantages and disadvantages of the use of technology in courses appear to be balanced in terms of applicability, which begs the question of whether the development and implementation of an ideal policy is within the realm of reality, especially

given institutional variations. The following reflections outline elements of consideration for policy on the use of technology by educators in higher education. These are derived from existing literature, selected technology policies in higher education institutions, and reflections from the authors' collective years of teaching experiences in two different disciplines: nursing and education.

1. Policy on acceptable use of technology is necessary, yet its contents could be difficult for educators to implement.

The aforementioned institutional variations could, in fact, make it difficult for educators to implement certain policy clauses. Factors such as geographical location, class sizes, access to technology, and student special needs accommodations create a variety of contexts in which educators could be using technology in their courses. These may vary by institutions, and even in individual courses. It is therefore difficult to formulate a policy that would be all-encompassing and consider all potential instructional scenarios and contexts. An example of a clause that would be difficult to implement is the following, found in an institutional computer use policy: "University resources must not be used for mischief" (Brock University, 2005). There are, however, no examples provided as to what could constitute "mischief." It could be challenging for educators to become aware of "mischief" that is being perpetuated on university or personal IT resources, and/or to apply the sanctions prescribed in the policy.

Furthermore, Becker (2013) mentions that policies developed by educators must conform to institutional policy, but that the onus is typically on the educators to decide whether or not to allow the use of electronic devices in their classrooms. This affirmation is supported by Tindell and Bohlander (2012). A common definition of policy is: "a definite course of action adopted for the sake of expediency, facility" (Dictionary.com, n.d.). More specifically, Caruso (2009) indicates that the purpose of a policy is to establish general guiding principles for the way that an organization should conduct its business or operational practices. Swearer, Limber, & Alley (2009) support this indication by maintaining that a policy sets the groundwork for communicating institutional expectations. A policy typically affects all individuals who are involved in the organization. Consequently, if adaptation of the policy is at the discretion of the professor, and there is a lack of stringent adherence to its clauses, there is absence of a definite course of action. The question becomes then whether it is then really a policy, or simply suggested guidelines.

2. Instructors must use social media with caution.

Social media has provided a unique avenue for educators who wish to facilitate discussions between students in and out of the classroom. This approach could also smooth the progress of the distribution of course content. Some institutional policies, however, dictate certain behaviours that must be adopted when making use of social media. For example, an institutional policy on the use of social media states the following: "Be constructive and respectful while

discussing a bad experience or disagreeing with a concept or person” (Algoma University, 2012). On principle, this appears to be a well-intentioned statement that promotes good netiquette. No threshold is established, however, as to what constitutes a “constructive” and “respectful” comment. In his social behavioural theory, Mead (1981) postulates that individuals possess a hostility instinct, which inherently causes more heated discussions when allied against a common enemy or a negative issue than when discussing a more neutral topic. As such, discussions pertaining to a “bad experience” could quickly escalate. Numerous social networking groups establish codes of conduct to this effect, which are frequently breached.

While it permits the educator to create a more student-centered learning environment (Blake 2013), another difficulty associated with the use of internet and social media in the classroom is that by allowing students to autonomously search for information, social media also frequently distracts their attention from the course material being taught. Students multitask, which has been found to affect the quality of their learning (Sana, Weston & Sapana, 2013). In addition, it has also been the authors’ experience, which is supported by Sana, Weston and Sapana (2013), that other students are also distracted when a nearby peer is using technology for purposes other than what is being taught. This is not to mention that, while students may have instant access to information to complement the lecture, they are at risk of missing the continuation of the discussion and therefore may fail to maximize their learning. This could also lead to students misunderstanding crucial evaluative course components, making them less likely to succeed in the course. The authors of the current paper maintain that the time-honoured method of asking for clarification is preferable to an autonomous search for clarification, because the educator then provides information in the intended context.

Another consideration is the fact that, while technology may make the dissemination of information easier, educators should not assume that all students will automatically have access to the technology that is being used in the classroom. The same could be said for electronic assignment submissions. Students use a variety of word processing programs, which could be problematic for the educator. Yet, if an instructor was to suggest a program for electronic assignment submission, not all students necessarily have access to the program. Where Becker (2013) states that educators should assume that all students in their class could possess an electronic device of sorts (ex. smart phone, tablet or laptop), the authors of the current paper maintain that educators cannot readily assume that this is accurate.

3. Policies must not stifle or hinder academic freedom.

Academic freedom is a fundamental right that benefits college or university faculty. The premise that thoughts, opinions, or other information could be shared without worry of religious or political sanctions is a deep-seated principle in higher education. Numerous institutional policies contain statements such as the following: The University understands and is committed to academic freedom. As confirmed by Becker (2013) and mentioned above, educators typically have the opportunity to decide whether to allow electronic devices in their courses. They also have free rein as to ways to utilize electronic devices in their course delivery. The fact remains

that not all policies make reference to, nor consider, academic freedom. The authors of the current paper are of the opinion that the policy could become confusing in terms of its application, and that policy should not undermine academic freedom.

Conclusion

The reflections presented in the current paper represent, in part, the experiences of two established educators in nursing and education. Further research complementing this existing body of knowledge from the perspective of educators from different disciplines would be warranted. An interesting future investigation could also include surveying students who are currently attending a higher education institution in order to gain their perspective of whether the use of electronic devices in the classroom benefits or hinders their learning experience. Another interesting study could focus on the extent of student awareness of the benefits and limitations of technology to enhance their educational experiences. As mentioned previously, students tend to multitask in the classroom, which may divert their attention otherwise from course content. If students are aware of the consequences from misunderstanding crucial evaluative course components, they may then further appreciate the suggested guidelines provided from their educator and respect the purpose of electronic devices.

With regard to policy, the needs of both faculty and students should be explored on a level where academic freedom is in concordance to academic integrity. This is of notable importance, because of the potential ramifications of students having no suggested guidelines or policies for electronic use in class. The intent of this paper was not to suggest the abolishment of policy, but rather, to enlighten into possible factors surrounding the use of electronic devices that policymakers could consider in relation to their institutional priorities. More specifically, the authors' intent was to stimulate further discourse on the use of technology in higher education, which could lead to an alternate regulatory approach to this notable issue, especially given the complexity of its numerous dimensions. Further investigation in this regard would help validate the most appropriate method of incorporating and monitoring the use of electronic devices in the classroom.

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