Making a Case for Blended Learning in Primary and Elementary Grades

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Introduction

The year is 2007. I am working at a private English academy, a *hagwon*, in Seoul, South Korea. I have arrived at school a few hours before class begins to check my students' work from the day before. There is a required online element after each class. The children, mostly elementary students between the ages 7 and 12, log on to their accounts, complete a number of fill-ins and record themselves reading the responses out loud. If they feel so inclined they can watch the videos that are uploaded weekly from each class and respond to comments or leave their own. The school provides a computer room where the students can complete their homework each day after class, although many opt to just do it later at home. Every minute that I spend checking their work represents about 30 minutes of student effort.

This type of augmentation can be defined as blended learning. I draw my definition from Wai and Seng (2015, p. 430) who describe blended learning as the combination of online, mostly asynchronous, material that is used in conjunction with the more traditional face-to-face learning environments. Some of the research I draw on has studied what is called online learning, information communication technologies, or e-learning in which the bulk, or all, of the work is done outside the classroom (Simonson, 2011; Powell & Patrick, 2006; Juutinen & Saariluoma, 2010; Rivero, 2005; Quillen, 2011.). I will be utilizing the research in all these fields but I am advocating for a model

that has significant involvement from a teacher in a traditional classroom setting. Basham et al. (2013) give a comprehensive description of the various forms that blended learning can take. Their analysis highlights the flexibility of this form of education and discusses the design principles that must be undertaken to embrace an efficacious blended model. It is important to note that blended learning is not simply using computers to complete work normally done in pen and paper in the classroom. Blended learning is a form of pedagogy that requires changes in the way we teach. Curriculums, school cultures, and classrooms need to adjust their physical and conceptual framework to accommodate and embrace blended learning (Hew & Brush, 2007).

Blended learning has been used in high-school and institutions of higher learning for at least three decades (Bersin, 2004, p. 4) but its use in primary and elementary grades has been much slower to catch on. What are the reasons behind this lag? This essay will explore some of the issues surrounding the use of blended learning models in the primary and elementary classroom and make a case for their implementation. It is clear that more research must be done regarding the use of blended learning at this level but the practical and theoretical work that has been conducted warrants the acceptance of blended learning as a viable and beneficial option. In light of the rapid advancement of technology and the changing nature of the workforce, blended learning may also be a necessity (Premier's Technology Council, 2010; Basham et al. 2013).

History of Blended Learning

The Past

Blended learning has a relatively long history. IBM was using the asynchronous learning tool called PLATO as early as 1963 to help train its new hires. Its interface was basic but allowed the in-class training to be supplemented on the student's own schedule. The seventies saw the emergence of satellite systems that allowed courses to be sent around the globe and even facilitated the interaction of instructor and students as well as amongst peers. An example of this is the Stanford University Interactive TV network. Students and professors could experience classes without leaving their offices and submit work via courier. With the rise of the personal computer in the eighties and nineties came a corresponding boom in training software, often in the form of CD-ROMS. By the late nineties and early two thousands, CD-ROMS gave way to web-based resources although limitations in bandwidth would make the internet slow to replace the discs as the primary source of multimedia enriched learning resources (Bersin, 2004).

Blended Learning Today

Many countries and administrations have already made steps toward blended learning to some degree. Seventeen countries or departments of education responded to a survey conducted for the North American Council for

Online Learning. A report of the findings shows how blended learning is often a preliminary step toward fully instituting e-learning completely outside the classroom (Powell & Patrick, 2006). Turkey, for example, recognizes the money that can be saved by using e-learning to train its students. It hopes to take the blended example pioneered in grade 4-8 Math, Science, and Social classes and develop it for use in its vocational schools (p 25).

Primary/Elementary Setting

Beyond the Turkish example, there are many other governments and organizations that are using or developing blended models in the primary and elementary grades (Powell & Patrick, 2006). In the U.S., almost every state has initiatives toward online education and 31 of them have full-time online schools for k-12 (Basham et al., 2013, p. 52). Staker (2011) profiles 40 initiatives, mostly independent schools, which take steps toward integration of online learning to various places. For example, Rocket Education has a 75% class and 25% independent work split that they implement at three elementary schools in San Jose, California. The independent work is conducted in the learning lab under the supervision of human monitors and by utilizing online and software applications (p. 132).

Benefits

The use of blended can confer a variety of benefits on the student and the school. I will discuss blended learning as it applies to differentiation, its

convenience, the familiarity that today's students have with technology, and the relevance of activity that blended models bring to students' education.

Differentiation

One often cited benefit of a blended learning model is its promise to cater to a broader spectrum of learner (Quellin, 2011; Lister & Panos, 2005). By relegating some instruction or content to an online, asynchronous format, teachers are better able to address a broader range of needs in their classrooms (Rivero, 2005, p. 40**)**. Teachers utilizing online content are better able to challenge stronger students but are particularly able to reach students who were struggling with grade-level content (Stewart, 2011, p. 80-82).

Convenience

Utilizing the resources of the internet can bring a number of experiences to the student within the walls of their home or classroom. Class trips and various equipment are prohibitively expensive. However, there is now the technology to simulate many experiences that were once simply out of reach (Rivero, 2005, p. 42). Learning management systems such as Blackboard (Hargis & Schofeild, 2009, p. 35) and Moodle (Psycharis et al., 2012) help teachers and administrators manage assessments and progress in a systematic and automatic way.

Familiarity

The multimedia afforded by computers and the internet make a significant difference to blended learning's allure. Lister and Panos (2005) have shown how students responded positively to online audio resources provided in a language course in the UK. Elsewhere, teachers found that online games that feature embedded quizzes were an effective way to reinforce concepts in math and science (Lee et. al., p155). Compared to traditional textbooks, digital content is better able to engage and relate to today's tech-savvy students (Rivero, 2005, p 41). I can personally attest to the interest that students take in utilizing iPads in the classroom. I recently gave an assignment to create and present a biography on a francophone celebrity and every student did so without guidance. Their French skills were poor but they utilized Google Translate to find how to describe the person in French. They each logged on to their account and then shared it with the class.

Relevance

Technology literacy is becoming more and more important as technology advances (Premier's Technology Council, p 10). Students who wish to attend an institution of higher learning will have to possess skills that the former generations did not need. Staker (2011) notes that "half of all postsecondary students will take at least one class online by 2014" (p. 3). Therefore, an introduction to online learning is an imperative for a system that wants to

prepare students for furthering their education after high school. Lister and Panos (2005, p. 104) show in a small survey that students' confidence in using computers rose after participating in a pilot of a blended learning curriculum. Furthermore, simply using computers, the internet, and various other e-learning tools can create the context to learn 21st century skills that is an outcome of so many curriculums.

Obstacles

There are a number of obstacles that present themselves when trying to implement a blended learning model in the primary and elementary grades. Some are based on technological limitations and others are related to physical limitations of young students and their ability to benefit from largely independent work.

Certain features of the society and educational environment pose obstacles. A case study in Singapore (Lee et al. 2014, p. 160) revealed that the entrenched model of public examinations limit the extent that schools are able to commit to a blended model. These written exams require students to be proficient in paper and pencil skills that the blended method does not focus on. Therefore teachers are forced to abandon the blended model to a certain degree in the grades where these high stakes tests take place. Larkin and Finger (2011, p. 29) note that implementation difficulties can occur because schools lack either the technological or social capacity to implement them well,

school policies are incongruent with technology use, or the school culture is unsupportive of technology adoption. Therefore, school culture and the specific society are sometimes responsible for the resistance or acceptance of blended learning.

Teacher preparation also becomes an issue. Stewart (2011, p. 1) has shown that the majority of teacher training programs still focus on traditional methods used in brick-and-mortar schools and do little to prepare educators for the technological demands of a blended pedagogy (Juutinen & Saariluoma, 2010, p. 1). This issue is further compounded by the fact that even if teachers are willing to acquire the proper training, they must do so while fulfilling the normal demands of their job (Stewart 2011, p. 81). This highlights the human element that pervades any pedagogy and resists change.

Many technical issues must be overcome before widespread use of a blended model can be viable. Lister and Panos (2005, p. 107) document how technical faults diminish teacher's confidence in using technology more extensively in their classes. Some technical issues include difficulties of installation of required software, connectivity issues, bandwidth limitations, and the acquisition of the necessary hardware to implement a successful blended format.

Young students also have physical and cognitive limitations that will affect how readily they adapt to blended learning models. Hargis and Schofeild (2009, p. 34) note the learning curve for simple keyboard and mouse tasks is a

barrier that must be accounted for in any successful integration of computers. This is even more pronounced in the early grades where students are still mastering other gross and fine motor skills.

Further difficulties of implementing blended learning models include a negative perception by teachers and an inability or hesitation to integrate the new pedagogy into the curriculum (Lee, 2006, p. 95, 101.). See Hew and Brush (2007) for an in-depth analysis of obstacles surrounding the adoption of blended learning.

The Future of Blended Learning

It is difficult to say where blended learning will find itself in the future. As it stands, it could be seen as a stopgap between a centuries-old brick-and-mortar model and a yet-to-be-realized cloud-based online school of the future. Staker (2011) puts it in perspective when she says the future of blended learning depends on whether, “online learning becomes a disruptive innovation to today’s brick-and-mortar classrooms or a sustaining innovation for them” (p. 165).

Some research and experimentation has been done which looks at mobile learning as the next step in the integration of technology and education (Simonson, p. 394). It is only natural to think of education in a mobile context in the light of the incredible proliferation of smartphone ownership. I can personally attest to the efficacy of mobile devices in language learning. I have

used applications such as Duolingo, Quizlet, and Flashcards to study vocabulary during commutes, while waiting in line, or at any free moment. Mobile learning, or m-learning, has been explored elsewhere (Sanderg, Maris, & de Geus, K., 2011; Powell & Patrick, 2006.).

I don't believe that e-learning and the learning management systems (LMS) that can be implemented will result in "total automation of administrating the teaching and learning processes" (Psycharis et al. 2012, p. 12). I do see blended learning and more online-oriented education becoming the norm in the coming years.

Limitations of this Study

I have gathered together a small number of research papers, government reports, and case studies that have looked at blended learning or discussed it in the context of other research. Many of them focused on high school and undergraduate settings and are therefore not necessarily translatable to an elementary or primary environment. Furthermore, the rate of technological change makes any writing on this topic retreat toward obsolescence upon printing. What relevance does a survey in 2006 have to a discussion on educational technology on the eve of 2016? The technology through which blended learning is delivered will be instrumental to its success or failure. Perhaps a saving grace in this regard is the relative sluggishness with which educational change takes place at a systemic level. Finally, the literature from

which I drew my findings is from myriad educational contexts across the globe and so it has limited external validity, at least at the local level.

Conclusions

Limitations aside, I believe the narrow research shows that blended learning has viability as a pedagogical method in a variety of contexts. Young students need to acquire media, technology, and communication literacy in order to achieve in the higher grades. Blended learning is a good fit because primary and elementary students generally need more guidance than their high school counterparts and so are less apt for fully online learning. The increased use of technology in a child's education is relevant to their lives and prepares them for high school and higher learning. The flexibility that blended learning provides gives teachers the freedom to tailor lessons for individuals more than the traditional methods will allow. Nevertheless, blended learning as a viable option is not free of obstacles. It seems that most of these issues stem from a lack of training, confidence, and equipment that could be addressed in a systematic way if an institution were to commit to blended learning as a mandate. The shift to blended learning from a traditional model would be an evolution rather than a revolution and so is more palatable to change resistant administrations.

This brief survey of blended learning is meant to give another voice to the often reiterated call for more research into the efficacy, feasibility, and

possibility of the use of blended learning in the primary and elementary grades.

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