Digital technology in education: a blessing or a curse?

Discuss the advantages and disadvantages of the digital revolution in an educational context.

It is typically understood that the digital revolution began to emerge during the 1980s, which marks a crucial point in history (Parsons and Oja, 2014). Since this time, technology has advanced drastically and continually. Today, it is clear that digital technology surrounds our modern day-to-day lives, and inevitably its impact on education must be considered.

Whether the digital revolution is seen as a curse or a blessing in education is an ongoing debate. The internet is a key aspect of the digital revolution and has provided a vast amount of educational information that is readily available; there are a number of advantages that should be examined. However there is still a level of resistance from many educators, even during this modern period, and reasons for this should also be examined and even potential dangers associated with e-learning (electronic learning). Education can be found in a variety of contexts, however for the purpose of this essay, the predominant focus shall be on formal education such as schools and universities.

Learning materials and the diversity of data that can be accessed via the World Wide Web is vast and continues to grow. Not only can educators use the internet to research classroom content, they can also seek information regarding teaching strategies, engagement techniques and various ways to develop as a professional educator (PBS and Grunwald Associates LLC, 2011). Research has shown that 67 percent of teachers use technology to support differentiation techniques in the classroom (PBS and Grunwald Associates LLC, 2011). Therefore, this leads a return to the question; why is it that some educators may not wish to embrace the digital revolution and view it as a curse to education?
It is necessary to examine the importance of learning through real life experience and following this, how we might conclude that digital technology within education is a curse. It can be argued that the emerging digital era decreases emphasis placed on understanding and interacting in the 'real world'. Norton (2014) supports this argument and after conducting relevant research, concludes that many secondary school students are particularly inclined to spend leisure time using technology and "teenagers can no longer tell the real world from the internet". It is important to consider the purpose of this news article; potentially to draw the reader’s attention, therefore this could be considered somewhat an exaggeration, however it can be argued that where technology is central to the modern classroom environment, this form of education is contributing to the ‘blur’ between the real and digital world. However, this argument is widely criticised. For example, advocates of the cognitive constructivist theory such Piaget (1952), disagree with the very foundation of this argument. Cognitive constructivists argue that reality is subjective; humans create their own meaning of what is real in this world (Swan, 2005). Therefore, it appears that this invalidates the argument that e-learning is a curse on the basis that understanding is not formed in the 'real world’, as individuals will interpret their own reality. Perhaps technology has become the reality of many and we should stop viewing them both as two different worlds; ‘real’ and ‘unreal’. This argument is supported by Beeching (2013, Cameron’s cyber-bullying advice) who suggests that whether we are educated with or without technology, both forms are "equally real in their own way".

A key factor that cannot be ignored within this discussion is that due to the digital revolution, technology surrounds our modern day-to-day lives. Following this, another
element of the constructivist theory is particularly relevant here. Advocates argue that learning is idiosyncratic (Sultan, Woods and Koo, 2011) and in order for an individual to make sense of a new concept that is presented to them, the learner must be able to relate new information to previous knowledge or an existing schema. This will support their learning. It could be argued that students of today will learn far more effectively where technology is integrated within their education, as the digital era surrounds our modern world and may contribute to a dominant feature within today’s students existing schemas. Prensky (2001) presents evidence to support this viewpoint, where he found during the modern era, many will spend double the number of hours playing video games than reading. After further research, Prensky (2001) concludes that in many areas of the world, those born and raised during the final decades of the 20th century, can be considered ‘Digital Natives’, where the rise of digital technology permeates their everyday lives.

Therefore it can be seen that the constructivist theory is supported by sound evidence that digital technology within education is a blessing, as it relates to modern day schemas and will support learning. In addition to this, since technology surrounds modern wider society, it could be seen as a curse to not integrate this into education. To provide an example of this, you could describe an average modern day person’s working day; to wake up by their mobile phone, used as an alarm (Hale, 2009), possibly cook breakfast on an electric cooker and go to work where he or she may use e-books instead of traditional paper books and make phone calls throughout the day. These are some examples of how technology can permeate our lives and the working world. Therefore surely students should be prepared for this during formal education? Many would support this, such as Caine and Caine (2011), who hold that formal education should prepare individuals for wider society and the world
of work. This viewpoint could indicate that without technological knowledge, the formal education system has not fulfilled its purpose (Jones, 2007).

So why then, are many educators reluctant to embrace technology within the education they provide? As Gura and Percy (2005, p. 1) argue, “why do educators avoid the greatest innovation to learning to come along in over a century?”. Using Prensky’s (2001) terminology, it could be argued that those born before the emergence of the digital revolution are ‘Digital Immigrants’ and may not feel confident using technology without adapting to the era that they were not raising in and an environment that had not grown up to understand. Many younger students are likely to have grown up with and are very comfortable with the era. Digital Immigrants may be reluctant to believe that their students can learn through the use of technology as they have “their foot in the past” (Prensky 2001, p. 2). It is not technology itself that is a curse to education, yet it is that older educators are simply reluctant to adjust their views. However, this argument is inconsistent with particularly relevant studies. For example, Lau and Sim (2008) conducted a study within a secondary Malaysian school and found that older teachers were more likely to use technology in their lessons than younger teachers. Therefore we cannot conclude that the reason why certain educators do not view technology as a blessing as due to age, but there must be other determining factors. We cannot ‘pass the blame’, perhaps there are genuine flaws associated within e-learning, these shall be discussed.

Although there are many advantages of the digital revolution in an educational context, it appears there are also many critical disadvantages to consider. For example, although it can be seen as an advantage that there is a large amount of data available through the internet,
this is not always viewed as positive. For example, an educator may ask their students to conduct a research project on a topic that is new to the students. An educator may believe that the internet is an effective tool to complete this activity, as it allows students to complete independent work and there is an extensive amount of information available online. However, as the internet grows, it can be difficult to filter the data; firstly to initially locate relevant information and secondly, to identify which information is derived from a legitimate source; "Countless nodes of divergent opinions...makes one ponder the validity of each one" (Kop and Bouchard 2011, p. 66). Similarly, Walford (2012) describes the internet as “information overload”. Although, it is important to be sceptical of this source from The Daily Mail and its possible intent to shock and attract an audience, it does provide an understanding that there is an excessive amount of data that could cause confusion within education. Although this is a drawback, it does not appear that this disadvantage in isolation can lead to the conclusion that technology is a curse to education. To expand, in order to overcome confusion or mistaking fact for opinion online, a new literacy is required; digital literacy. Students must develop these skills through practice and effective browsing online and effective location will become more intuitive (Leu et al., 2011). Therefore this issue can be overcome. However another disadvantages can arise from this; in order to develop this literacy, practice is required. Many students who have internet access at home, can achieve this however there is an economic issue, where those within the classroom who cannot afford such technologies could be disadvantaged. Evidence supports that within the UK almost 300,000 do not have access to the internet (Davies, 2013), therefore this can separate students based on computer ability rather than whether they are able to comprehend the intended topic and could cause barriers for students to reach their full
potential. Therefore on this vital economic basis, it could be argued digital technology is a curse within education.

In contrast, social media is another key aspect of the digital revolution that continues to grow today and is rapidly becoming a valued educational tool. Moran, Seaman, and Tinti-Kane (2011, p. 3) found during a university study, “over 90% of all faculty are using social media in courses they’re teaching”. These sites include, Facebook, Twitter and YouTube. There are many advantages to incorporating social media within education. A key advantage is the social media can be a fantastic tool for communication and collaboration, this is very helpful when completing group activities and assessments (Dunn, 2013). For example, Facebook provides a messenger application that is free and messages are sent instantly, which is a blessing to students who face geographical issues and are unable to meet at the same place and at the same time. Another advantage to using social networking for educational purposes is that as previously described, students are likely to be familiar with social networking, it is something that they are comfortable using. However, there is a drawback here, as there are a number of distractions on these sites unrelated to education and may cause students to become disengaged as they associate networking with leisure time. In addition to this, there is a large degree of negativity found on social media. Encouraging learners to use social media for educational purposes can involve high risks. Research has found that 25% of young persons have experienced cyberbullying (Nobullying, 2015) and it has been suggested that to avoid this negativity, the best option is to avoid using these sites altogether where bullies may feel as though they are hidden behind screens are therefore more careless to communicate negative judgement. Therefore due to this vital disadvantage, it can be argued that this element of this digital era should not be
integrated into education. David Cameron suggests that these sites should be boycotted (Coyne, 2013). There is also a concern that social networking and other forms of digital communication may replace face to face interaction, where facial expression and other non-verbal forms of communication are key to expressing true meaning that can be lost in typed messages. Miliszewska (2007) supports this point drawing from conclusions from a study regarding online transnational education. After researching students’ opinions, Miliszewska (2007) found that despite fewer geographical barriers through social media, the majority favoured face-to-face interaction as extremely important for delivering effective communication and learning.

In conclusion, it can be argued that it is the duty of an effective educator to decide the role of technology within the education they provide. Gura and Percy (2005) argue that we should define its place. It is clear through many points discussed above that technology can be a curse to education, if utilised in the wrong ways. Technology should not replace teachers due to the benefits of face-to-face interaction, however should be carefully incorporated as a facilitator, that provides support to teachers, (yet does not replace them altogether) and prepares students for the inevitable use in wider society and to increase employability (Dunn, 2013). Therefore, if used strategically digital technology is a blessing to education.

Word count: 2080
References


