Chapter 1

The Art of the Possible: Using Technology to Make Teaching More Inclusive

Simon Ball
JISC TechDis, UK

ABSTRACT

Inclusive practice is both an ethical and legal requirement in UK higher education. Technology can be utilised in many circumstances in teaching to improve accessibility and inclusion. Some techniques are very simple to learn and can potentially have a significant impact upon students. This chapter describes some of the simple techniques and considerations that teachers can use to make their teaching more inclusive without requiring a high level of technological expertise or time input. It also highlights some case studies where technology has been used successfully to uncover or develop an aspect of inclusive practice.

INTRODUCTION

Technology, possibly more than any other development in teaching in recent years, has the potential to provide and liberate, but there exists also a responsibility on educators to ensure it does not prevent and restrict. In the case of disabled students, this responsibility is a legal requirement (UK Government, 1995).

There is a vast variety of types of technology that can be added to the educator’s palette of tools, with many purposes and myriad audiences (Hart, 2010). Technology should never be the driver for pedagogy, but rather a means to facilitate it, and in particular a means to facilitate inclusive pedagogy (Ball, 2009). All learning, teaching
and assessment must be created with inclusion in mind to some degree. Technology can aid that inclusivity in many cases, although there are bound to be some occasions where the use of technology is not the best solution, which is entirely appropriate as technology is merely one of a suite of potential solutions.

More than aiding inclusivity, technology can also aid productivity, both on the part of the learner and the teacher (Ball and McNaught, 2008). We are not suggesting, as some have done before, that moving to electronic marking of scripts, for example, will suddenly result in a greatly reduced time on task for teachers, although in some cases this may well be the case (McCormack and Jones, 1998; Ryan et al., 2000). The technologies that are described in this chapter, however, are more than merely ‘assistive technologies’ aimed at users with very specific needs, such as screen reading software or voice recognition systems. Many of the tools we will highlight can potentially aid the productivity of all teachers/learners if used appropriately.

The increasing pervasiveness of technology into the realm of the classroom, lecture theatre, laboratory, studio and field offers an opportunity for increased engagement with a wider variety of learners (Roschelle et al., 2007). In some instances the characteristics of these learners are known and can be directly catered for via ‘reasonable adjustments’ (UK Government, 1995), but in most cases educators are not aware of the full range of needs and learning styles that may be present within any given student cohort (even where the cohort is ‘known’ it is likely that undisclosed or even undiagnosed disabilities may be present, in particular dyslexia or mental health issues) (University of Exeter, undated). The range of potential characteristics and needs across an educator’s audience is as large as within the general populace, and learning, teaching and assessment must be designed and delivered with this factor very much in mind. This chapter will highlight the effects that good and poor practice can have on the learner’s experience. It will also provide examples of where the techniques have been successfully put into practice.

‘Design for All’ and the ‘Holistic Approach’

In brief, ‘Design for All’ (also known as ‘Universal Design’) proposes the creation of a resource that is accessible to, and usable by, every member of the community for whose use it is intended (European Commission, undated). However, this very definition is a contentious one. Some would argue that ‘Design for All’ simply means the creation of a single resource that can be accessed and effectively used by every person on the planet. Others would argue that the creation of a range of different resources, all of which are suitable for some users, and which reach all users when taken as a whole, also fits within the definition of ‘Design for All’ (Aslaksen et al., 1997). Then there are those who would argue that ‘Design for All’ is an inappropriate term, detracting from the real aim which is to create resources that are fit for purpose, and therefore which serve the users for whom they are intended. Other terms have been suggested that more accurately fit the intention, such as ‘User-Centred Design’ or better still ‘User-Sensitive Design’ (Newell & Gregor, 2000). For the mainstream educator this debate is a side issue. What is important is that when designing or creating materials for learning, teaching or assessment, the designer takes consideration of the full range of characteristics and needs the audience will exhibit (including technological and informational as well as traditional ‘accessibility’ needs) and caters for as many of them as possible accordingly.

Many educators find the matrix of potential learner needs and helpful technologies a challenge that they do not have the time or skill to address, and seek a checklist or set of guidelines
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