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## **WHY OPEN EDUCATIONAL RESOURCES ARE ESSENTIAL IN ELEARNING**

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The free sharing of open educational resources (OER) can be seen as essential for promoting the creation of content usable in elearning. OER can be effective in reducing the knowledge divide that separates and partitions societies. Educators worldwide continue to face significant challenges related to providing increased access to high quality learning, while containing or reducing costs. New developments in information technology, especially with tablets, phablets, mobile phones and different gaming devices, highlight the shortcomings and challenges for the traditional education community, as well as those of more flexible providers, such as open universities. Such developments have the potential to increase access and flexibility in education by rendering it ubiquitous. Basic education for all continues to be a goal that challenges – and will continue to challenge – many countries. OER for elearning, can be used to overcome many of the obstacles faced by both learners and educators.

This growing trend toward ubiquitous computing using the power of networks and mobile devices has opened the door for learners and instructors to access the world's knowledge from almost anywhere, at anytime. The internet houses the world's treasure of knowledge. In this context the role of OER in providing learners and teachers with learning content and applications and educational applications is becoming increasingly more relevant. It can be argued that OER are essential in educational contexts. Commercial applications and content come with use limitations that include digital locks and legal prohibitions.

### **Permissions**

Besides enabling remixing and alterations in support of relevant pedagogy for learning, OER, with their explicit permissions, can also reduce costs by providing reusable elearning applications at no cost, thus increasing access to quality learning opportunities (Openstax, 2014; Miao, Mishra & McGreal, 2016). Their usefulness is primarily supported by the open licensing afforded by OER. Authorization to change, adapt, distribute, and augment become realistically possible with open licensing as provided by Creative Commons licences or by releasing the materials into the Public Domain (Creative Commons, 2016).

### **Technical Controls**

Publisher can technically control how, when, where, and with what specific brands of technological assistance licensees are able to access their applications. Moreover, the owners also deliberately cripple the devices on which their applications are used to ensure that only

their “approved” uses are possible. This is often problematic for disabled users. The visually impaired, for example are denied use of a text to speech function and in many cases cannot even increase the text size. Moreover, many commercial systems still disable highlighting, annotating, hyperlinking, etc. -- these features are important for educational uses.

Different formats are nearly always problematic when mixing and mashing materials. OER can be changed and altered for use in different formats without permission. Hyperlinking is a normal learning activity that is often disabled in commercial applications. The devices are often purposely crippled by the application owners, or commercial standards are used so that content and applications cannot be ported to other devices. Permissions of all kinds also need to be re-sought for tampering with the material for re-use, re-purposing or mixing, even if fair dealing allows for it. This can become an impractical burden putting a real damper on any attempts to provide learning for all. Universal accessibility also requires that applications provide reliable and consistent service. Of particular concern for the disabled, proprietors also disable the ability of audio readers to access the content. Audio readers are becoming popular especially for people with visual disabilities and with commuters on long trips (Elibra, 2012).

Online learning becomes problematic when altering, augmenting or adapting is not permitted. commercial publishers wish to control and restrict the formats, devices, geographical regions and other circumstances that users may want to make use of the educational application. The proprietors wish to lock in and control their customers. Many, if not most use DRM (Digital Rights Management) restricted formats.

### **DRM (Digital Rights Management)**

DRM software enables the tracking of users and protects content. It is used by copyright owners to control, limit and restrict how users can use their materials (Subramanya & Yi, 2006). It is sometimes referred to as TPM (Technological Protection Measures) (Parliament of Canada, 2005). These restrictions extend to both the hardware and the software. DRM can limit the devices that you are able to employ in accessing the educational application. It can restrict you to using the proprietor’s website and purchasing the proprietor’s materials, determining how, when, where you can use the application, and with what devices. DRM has even been used to prevent lawful licensees from accessing their own purchased applications. The DRM blocks legitimate users from porting their content to other devices; in many cases, DRM has been used to delete the legally purchased products from legitimate devices. And, DRM continues to prevent market competitors from participating and effectively stifles much innovation (Electronic Frontier Foundation, 2012). Online learning is particularly affected by DRM. Online learning environments need flexibility and cannot live with commercial restrictions that limit the capabilities of digital media.

Open learning is also based on trust among the participating students and instructors. As they share resources, the participants must have confidence that their personal information is not used for purposes other than those of learning and sharing with other students and the teacher. Companies using DRM have a history of open ended and indiscriminate collection of

private information for unauthorized purposes, using DRM to disclose personal information for inappropriate purposes (The Canadian Internet Policy and Public Interest Clinic, 2007). And with licences, companies have the right to invade your computers and networks without notice, and to disable software for any real or imagined license infraction.

### **Licensing**

These commercial licences (that users must accept in order to access the content or applications) are also a major impediment to online learning. These licensing restrictions can add needless complications to downloading applications and content, sometimes making it so difficult that users simply give up (Subramanya & Yi, 2006). Fortunately this practice is not endemic. Format shifting, as has been noted is made technically difficult, and this is reinforced with restrictive licensing that prohibits the practice. Even if one wants to retain the same format, commercial applications are licensed to only one computer (“for use solely on this device”) (EBIA, 2016), so learners who switch computers even with the same operating system are often restricted from doing so, or at a minimum they must contact the owners and request special permissions and/or register with a company.

These licences also include clauses limiting downloads of content to one time on one computer for one user – and it is non-transferable “for your use only”. Because the online environment as well as traditional classrooms are considered public places under copyright law, you cannot distribute or broadcast such licensed content among students or even lend a device to them. Licenses prohibit, not only copying, but also modifying, removing, deleting, and augmenting (improving). This stipulation along with the “sole device” stipulation effectively negates any attempts at online learning using such software, even if institutions are prepared to pay, pay again and keep paying for the same licenses until they expire. And, if institutions don’t keep paying they may no longer be able to access data or records linked to that product. Licenses also prohibit the transfer of content to other students when teachers wish to use a variety of devices with different groups of students in later semesters.

For those educators who wish to avail themselves of any fair dealing (or fair use) rights, these licenses can effectively negate them along with the right of first sale that normally allows buyers to resell their purchases (EBIA, 2016). The license represents a contract agreed to by the licensee to not avail themselves of their fair dealing rights or first sale rights. Contract law can trump fair dealing, as it trumps ownership. Watter (2016) refers to this as the post-ownership society.

### **Geographical Restrictions**

The predicament of an iPad owner in Luxembourg puts the question of geographical restrictions in a clear light. Even though he would like to legally purchase an application, he cannot because it is not available in his country. He can find material on pirate sites, but he wanted to buy legally and could not. Another commentator, talks about user “anger” noting that geographical restrictions using DRM are “the most pressing issue” (Adin, 2010). Google’s “Geographical Constraint” error message along with YouTube’s “This video is not available in

your country” are notorious examples of this, when users get an error message when they attempt to download books or videos that are not licensed in their country. For instructors, of course a legal purchase is mandatory, so in many countries they are effectively excluded from using much relevant applications (MobileRead, 2011). For borderless online courses from institutions that deliver lessons to many different countries, the restrictions effectively prevent them from using this content. The copyright owners, in effect, are encouraging piracy through these geographical controls that prohibit legitimate uses.

## Conclusion

So, the technological and legal restrictions placed on commercial games can effectively render these applications unusable in many educational contexts. In order to address this, educators should consider using openly licensed applications that are becoming more widely available.

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