ICT in teaching, learning and assessment

Not only are all primary and post-primary pupils now pupils of the Primary School Curriculum (1999), but many of our student teachers are members of that generation. This landmark curricular change has happened in parallel with unprecedented technological change.

In recent weeks, the education community was prompted into a debate about the merits of the use of ICT in teaching, learning and assessment with the release of the OECD report Students, computers and learning – making the connection. Headlines were made by extracting interpretations out of context but nonetheless there was a number of interesting observations. These observations detail some of the challenges we face in embedding ICT into teaching, learning and assessment.

New approaches and methodologies

“Another interpretation is that we have not yet become good enough at the kind of pedagogies that make the most of technology, that adding 21st century technologies to 20th century teaching practices will just dilute the effectiveness of teaching”


With new disruptive technologies come new approaches and methodologies for teaching, learning and assessment. Just because advances in technologies bring us more information than we require does not mean that we accept everything presented to us. We develop comprehension skills in skimming, scanning, determining importance, summarising and selecting the information we require. Some of these skills are being diluted through the convenience of search engines. Furthermore, commercial search engines create ‘filter bubbles’ in that the results returned by our searches are tailored for us based on our previous searches.

Teaching children how to search for information in one trusted source like Britannica School (available to all pupils and teachers at home and school through scoilnet.ie) is a safe place to start. DuckDuckGo is a search engine that does not store previous searches. There is an option to filter searches according to region (i.e. Ireland). Previous searches are not tracked thus reducing ‘filter bubbles’. Copy and paste answers “If students use smartphones to copy and paste prefabricated answers to questions, it is unlikely to help them become smarter. If we want students to become smarter than a smartphone, we need to think harder about the pedagogies we are using to teach them.” Students, Computers and Learning – Making the Connection (OECD, 2015).

The teaching approaches of today are constructivist in orientation whereby the teacher facilitates discovery learning through carefully prepared learning experiences and finely tuned pedagogical skills. When we assign projects for children to research and report their findings, we teach them to find and select information effectively and ethically. The importance of citing sources of information is stressed and simply representing someone’s work as their own is neither beneficial nor acceptable. Of course, this does not simply apply to written text but also to images (still and video), sound files, video files, animations etc. Students should not be using technology just to consume information now it can be used to create new knowledge and collaborate with class members.

Technology enhanced teaching, learning and assessment

Taking a view of assessment as both formative and summative means that students can assess themselves and be assessed. Students become more effective learners by reflecting on the learning experience – what I found easy, what I struggled with, what I needed to do to increase my understanding etc. Collaborative learning processes and the increasing use of ePortfolios create both challenges and opportunities for the teachers and students of today. ePortfolios are not just electronic folders of files – they are made up of three components:

1) Storage: folders of multimedia files we find, select, collate.
2) Workspace: Drafts of work with opportunities to provide feedback/comments and respond to same.
3) Showcase: Final projects are showcased.

“Technology can amplify great teaching, but great technology cannot replace poor teaching.” Students, Computers and Learning – Making the Connection (OECD, 2015).

The art of teaching cannot be lost in the midst of all these technological advances. The ability to differentiate instruction according to the needs of the student is at the core of effective teaching. Technology, no matter how expensive it is, used as a substitute for a book used in a transmission mode of instruction will not enhance learning.

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