

## **Integrating Technology in the Classroom: Educational Apps vs. Pedagogic Workflow**

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There is no doubt that technology integration in the classroom is the way forward for 21<sup>st</sup> century teaching and learning. Indeed, to visit a school that does not use technology in education seems strange! A collection of recent studies by researchers from the National Endowment of Science, Technology and Arts (Nesta 2012 - 2014) show that technology can boost learning, but much too often the technology is used without a strong understanding of the power to transform education and many institutions are still using technology to support 20<sup>th</sup> century teaching methods and learning objectives.

About three years ago, there was much hype about what type of technological device to buy, ranging from Google Nexus to Samsung to iPads or Surface tablets. Educational technology was a risky game then and required much investment in a short period of time. The big question for schools was “which would be the better investment for long term strategy, taking into consideration the growth of educational apps?” As it turns out, it makes no difference, which one is the bigger or better player in the market place. Within Education, all three players, Apple, Android and Windows have over 100,000 educational apps in their store. These apps are found to appeal to the children and add variety to teaching and learning. They have emerged in classrooms where teachers use them to enhance and enrich their lessons in subject specialist areas, such as, in one’s timestable, phonics, or spelling practices.

So, while the introduction of subject related educational apps is often the common use of EdTech in classrooms, its use as a playful learning tool with little or no pedagogic instruction makes it limiting. Many schools still find themselves in situation where the technology is used as an add-on effect and not integrated seamlessly into the lessons. Although there is evidence to show that educational apps are productive in encouraging engagement and motivation, the killer app is still the *teacher and pedagogic interactions* that take place between the two (Parmar 2014).

There are interpretations that in order to build deep, conceptual

understanding and higher-order thinking with the children, technology based lessons still require intensive teacher-student interactions. Additionally, there are observations to suggest that schools have not yet become good enough at the kind of technological pedagogies required to make the most of the technology use in their classrooms. Then, how do we adapt using educational technology in 21<sup>st</sup> century education? In order to create great teaching where the use of technology can amplify learning and development, a *pedagogic workflow*, incorporating all traditional elements of teaching practices and the current educational apps, becomes necessary.

This so called pedagogic workflow is the disappearance of walls and the enclosed structure of the classroom where both the teacher and student can communicate seamlessly through various means of digital channels. It is the use of a blended learning approach where the technology becomes transparent. It is the pencil case design incorporating teaching strategies, where the student and teacher can flip between working on paper, capturing data digitally and producing an end result in the cloud. It includes the seamless and effective option of feedback and assessment, which can take place in real time or within a few days of submission of homework. It is the curation of all materials in one location, highlighting areas of metacognition and differentiation, sewing together various teaching resources of videos, images, worksheets, quizzes and content to external applications such as YouTube, e-books, and subject specific apps which are both transferable and available to the students anywhere, anytime and in any place. To be clear, it is the *facilitation and instruction* of learning processes rather than the more directive methods of teaching.

This shift of mindset in understanding 'teaching' vs. 'instruction' is the beginnings of creating an appropriate EdTech pedagogical workflow. The term teaching can be quite misleading and often takes a top-down teaching method, as seen in most schools still today. When teachers come to understand that through technology, they are offering *instructional processes*, a digital workflow can be better understood and created.

Whether this is conducted via an iTunes U course in collating posts and assignments together, or the Office 365 environment using the various Microsoft products to submit and/or exchange discussions of homework, or even the Google Classroom where student's access shared documents and teachers provide feedback via the Google apps, it makes make no

difference. The key message is that it should enable both the teacher and students to access learning and collaboration at a developmental pace, sharing direct instruction and collaborative learning between themselves and peers.

We have long passed the debate of what type of technology to purchase. We have also passed the time to match apps to curriculum needs. There are plenty of websites that promote this use. We have, however, arrived at a time where creating a pedagogical workflow in classrooms (and eventually into school culture) is necessary in order to utilise edtech at its best. Although, technology has the potential to amplify great teaching and is there to help teachers to do their job more efficiently, it is important to remember, it is not there to replace them. Teachers are still the catalyst that will facilitate the instructional processes in an educational technology environment.