

A Helping Hand in Using Technology in the Classroom

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In recent years technology usage in education has been accelerating rapidly, and the digital options available to teachers growing. This ongoing development of new Information and Computer Technology-related (ICT) educational tools can often offer teachers what seems to be a multitude of confusing choices. Teachers fortunate enough to be involved with Educational Technology (Edtech) development-related programs at their university run by experts in computer and digital technology are given the opportunity through these advisers to become reasonably comfortable and proficient with many of the digital tools being used in education today. Teachers in these programs develop the confidence, knowledge base, and willingness to try out and use new tools and technologies. However, a great number of teachers do not have these professional development opportunities, particularly those working part-time at a number of universities or those in universities where Edtech implementation is not seen as a priority. This article outlines some frameworks which offer guidelines for teachers to understand where they may stand in relation to the implementation (or not) of Edtech in their classrooms. The frameworks offer directions for teachers to follow in taking some graduated steps towards developing their understanding of the role of technology in teaching and in expanding, and integrating the use of technology in their classrooms.

I imagine that quite a few college teachers hear a conversation similar to the following, “Yeah, I’m thinking about trying out the App, Kaizena, for putting voice comments on my student work shared through Google Docs. You can get it at the Google Web store. I think you need to share the App download with your students too, though.” They may feel, firstly, a little intimidated by the tech talk, and secondly, that trying to keep up with the rapid changes and developments in technology may not be worth all the time and effort. The use of educational technology certainly has been accelerating greatly over the past five or six years. G-suite for Education, Microsoft Classroom, Edmodo, Moodle, and LearnBoost are just a few of the learning and workflow management systems that are currently on offer for teachers. The large, and ever-growing, number of these learning management systems, learning applications, digital teaching tools, and workflow management systems can be overwhelming for teachers, especially those who consider themselves not particularly skilled technology users.

In fact, a great many of the college teachers I have worked with, both Japanese and from other countries, tend to regard themselves as “not too good with computers”. In my own case, five years ago I was sitting in a course orientation, one objective of which was to learn how to teach Google Apps technology and tools to assist students in collaborating on classroom tasks and presentation projects. At that time, I would have considered myself a teacher for whom technology as an option in teaching was close to the bottom of my list. Now, five years later, I am a Google Certified Educator, and one of the people that other teachers come to asking for help with using the G-suite for Education Google Apps range, which our university has as part of being a Google Educational Domain.

I was very lucky. In my early steps towards a better understanding of the potential applications of technology in my teaching, I had mentors who had developed a program that introduced not only the student, but also the teacher to means of accessing, and successfully applying Google Apps (amongst other useful tech-related educational and research tools). I had colleagues who were very interested in increasing awareness of the power and utility of new digital tools, and passing on

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their expertise in this area. I learnt from these people how digital tools can bring increased opportunities for students to collaborate with their peers and the wider academic community. I also learnt how students and teachers can spend much less time hunting down answers to questions, and more time on creative skill building tasks. Furthermore, they showed me how teachers can flip the classroom and assign learning to be done at home through videos or multimedia text-sets with links to websites, opening up more class time for discussion work and application tasks with small groups of students. Finally, I discovered ways in which teachers can dramatically cut down on their time spent on basic classroom management through adopting digital learner management systems or workflow management systems such as Google Classroom.

For teachers working part-time at a number of universities, or in universities where attempts to implement digital tools are not particularly encouraged or supported by the department, however, gaining this knowledge can be a much more difficult process. For those teachers, I would like to suggest some technology implementation frameworks that let you easily and clearly place yourself within a technology ladder of usage, and also let you see how you might plan to move up a rung.

Levels of Technological Implementation (LoTi)

LoTi is a framework developed by Dr. Christopher Moersch (1995) for defining at what level technology has been integrated into the instructional setting. The LoTi framework also describes the educational setting in terms of being teacher centered and involving lower-order thinking skills, or student centered with a focus on higher-order thinking skills. In its Level of Teaching Innovation Framework, it starts with LoTi 0 (Non-use). In terms of use or encouragement of digital resources, LoTi 0 describes a setting which does not use such resources to any extent. It then moves through 7 more levels ending with LoTi level 6 (level 4 includes level 4a and 4b) describing an instructional setting using and with access to extensive and advanced digital and online tools and resources and an emphasis on higher-order thinking skills. In the words of Dr. Christopher Moersch (2001, p.23), LoTi “...was an effort to create a consistent set of measures that accurately reflected the progressive nature of teaching with technology.” Of special note is the LoTi Sniff Test which allows teachers to ask themselves questions and follow a flowchart to find out where they stand in the LoTi framework. The LoTi framework and Sniff test offer a useful and informative framework for instructors to easily gauge at what level they are integrating higher-order thinking skills with the available technology, and to envisage what their next step might be. LoTi offers a free self-paced introductory learning course to the LoTi methodology, and for those wishing to learn more, a comprehensive pay-per-unit training course is also available.

International Society for Technology in Education (ISTE)

The International Society for Technology in Education offers teachers an opportunity to look at their guide to implementation of digital technology and strategies in learning and teaching in its ISTE Standards for learning, teaching and leading with technology. Adopted by a wide range of institutes around the world, the standards are separated into guidelines for teachers, students, administrators, coaches, and computer science educators. The guidelines are currently being refreshed to see the teacher as learner, teacher as leader, as citizen, as collaborator, as designer, as facilitator, and as analyst.

TPACK and G-Suite for Education

There are other useful avenues for teachers to explore when looking for direction, or seeking to develop their use of technology in the classroom.

a) Technological Pedagogical Content Knowledge (TPACK). TPACK examines and defines what kind of knowledge teachers require to be able to teach effectively using technology. It considers every educational context as dynamic and unique, thus promoting the importance of creativity and flexibility when considering using technology with groups of learners. The TPACK academy offers a wide range of resources to explore the ideas and concepts behind TPACK.

b) G-suite for Education. From Google, this set of applications, including Google Classroom, Google Forms and Quizzes, have a relatively soft learning curve and will assist teachers in streamlining their work flow and adding to their creative options for lesson making. G suite for Education offers a free training course to become a Google Certified Educator (Level 1 and 2) at the end of which a 3 hour test (costing 20 dollars) of practical skills and knowledge can be taken

for official certification. Google also offers a certified Google Trainer and Innovator course. For teachers interested in trying out Google Apps in their teaching, the Eric Curtis Blog Control Alt Achieve: Transforming Education with Technology offers a number of easy to follow and comprehensive tutorials on understanding and using Google Apps in the classroom on its Resources page.

Missed the Boat?

A colleague of mine, who is soon to retire, has been one of the teachers at our university leading the implementation and spread of Google Apps in improving administrative workflow, collaborative opportunities for students, and quality of classes. He started to use Google Classroom last year, and in his winter teaching term last year ran a mostly paperless classroom. He has been active in India where he helped colleges there to become Google Educational Domains, which offer educational institutions some special benefits. He has held workshops demonstrating the educational applications of Google Apps such as Google Classroom and Google Drive. He is not that technically inclined, but decided that it was never too late to “give it a go”. He has been delighted with the time savings and the new creative possibilities opened up by adding these technological tools to his classroom, and inspired to share these with others.

Have a look through the frameworks to find out where you stand in your use of technology, and consider how you might innovate some of the things you have always done with your students and classes. Think about how technology might make a difference in streamlining your workflow, adding variety to lessons, and in improving collaboration between students. Now, you may have the desire to attend some Technology in Teaching (TnT) workshops to find out more about digital tools to empower your students and interest them more in learning, and help you save time in your administration flow. Once you start, it can be contagious. The key is to carefully consider how technology can enhance and compliment your own personal style of teaching, and to discover your preference in balancing your use of digital tools and traditional methods.

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Resources

Eric Curtis, Control Alt Achieve Blog

<http://www.controlaltachieve.com/p/resources.html>

TPACK

<http://www.tpack.org/>

International Society for Technology in Education

<https://www.iste.org/>

G-suite for Education

<https://www.google.com/intx/en/edu/>

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