

# eLearning in medical education – Costs and value add

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## Abstract

This article (and its accompanying and complementary presentation blog [<https://telat14apmec.blogspot.sg/2017/01/elearning-in-medical-education-costs.html>]) expands on ideas presented and elaborated on during the pre-conference workshop (<https://telat14apmec.blogspot.sg/2016/09/essential-skills-in-elearning-pre.html>), and main conference symposium (<https://telat14apmec.blogspot.sg/2016/09/educational-technologies-propaganda-or.html>) on this topic at the 14th APMEC. It will specifically address the issue of the costs involved, and value add of eLearning. It is presented in two sections, 1) as a series of short conversational style quotes intended to make a case for the use (or not) of eLearning / Technology enhanced learning, which were recently shared in the preamble to a more formal presentation on this topic; and 2) as a single paragraph compact article, augmented by internal keyword links to additional resources, links to the original workshop and symposium presentation blogs, an audio podcast (<https://www.dropbox.com/s/7ltmt6z5unh6r6j/TeLforTAPS.m4a?dl=0>), video (example 1) (<https://www.dropbox.com/s/igvpiya9j26kldg/TeLvid1TAPS.mov?dl=0>) or video (example 1, embedded version below) demonstration, and interactive online bulletin (<https://padlet.com/dnrgohps/practicalTipsToUseTeL>) board (most updated versions of these media, and multimedia links will be on the blog).

*The following section was first shared by Goh Poh Sun at 14<sup>th</sup> APMEC 2017 with participants; and Education team at NUS Dentistry on 3<sup>rd</sup> March 2017. The link can be found at*

<https://telat14apmec.blogspot.sg/2017/01/elearning-in-medical-education-costs.html>.

## I. WHY USE TECHNOLOGY TO ENHANCE LEARNING (TeL)

eLearning, or Technology enhanced learning (learning enhanced by use of the web/online through mobile devices, accessing digital content, and promoting learning activities and interactive learning through software and Apps), like any teaching aid or tool, need not be used if all the optimal conditions for teaching and learning exists in a traditional, bricks and mortar classroom, and there is no need to extend the educational reach of the teacher, or interaction with the student, beyond a single classroom encounter - with no necessity to engage and interact before or after class. (Goh, 2016c)

learning" include having a skilled teacher available, fully present, rested, not interrupted (by phone calls - consultation requests or text - WhatsApp messages), in peak physical health (not unwell, jet lagged, sleep deprived); interacting with a class who are all present, fully engaged, in peak physical condition (not unwell, jet lagged, sleep deprived, not available to attend due to personal or other work commitments (running ward or clinic), not interrupted, not called away); and with students not required, and who do not require to pause a presentation-presentation or discussion narrative or process, reply to a point; and with all students able to ask questions as and when required by interrupting the presenter-teacher.

But if you want to extend and expand the "classroom", and contact with students, before - during - and after class; to offer (all) students the ability of make points, and pose questions at the same time, and synchronously with the "live" presentation; to share and make accessible learning-educational content (for pre-reading) before class; and further reading-review after class; and for

These "optimal conditions for traditional classroom

reference during class (recommended reading-resource material; not just material that students search for themselves) ... if you (as the teacher), want to make the learning "recipe", the learning and engagement process visible and transparent, not only for peer review-self review/reflection/evaluation for improvement, but also to allow students to revisit not only the content and interactive learning activities, but also review and reflect on the learning and engagement process ... and learn from this ... then presenting directly and through an online platform (Goh, 2016h), with embedded engagement and interactive spaces and tools aids the digitally enabled teacher, and learner; not to replace traditional teaching and learning, in the physical classroom, with traditional methods and tools, but to enable, enhance, extend, expand teaching and learning opportunities and activities.

## II. COSTS AND VALUE ADD

eLearning (<https://www.instagram.com/p/BPOFFlnBxiw/?taken-by=gohpohsun&hl=en>) or Technology enhanced learning leverages on the exponential increase in internet use (World Wide Anniversary Site, n.d.), connecting a local and global audience (Doug, 2011), increasingly through mobile technologies (Jillian, 2016), which put the internet into our pocket, or purse, giving access to information and learning opportunities on demand, at a time and place customised to an individual learners needs, yet scaling up easily to a whole class, cohort, or global interest group; assisting teachers to expand and extend learning and interactive, active discussion and engagement beyond the physical classroom, and increase contact time with learning material and activities, not only before, during and after scheduled "class-time"; to support ongoing learning (Goh, 2016e) and training from undergraduate, through postgraduate, to lifelong learning and continuing professional development; taking individual students from novices, through competency and proficiency, to expert level performance and mastery. The costs in time and effort are greatly reduced by a concerted ongoing effort to systematically create, collect and curate (with attribution) useful, usable and (high) quality educational and training material in digital form (content) which is indexed and hyperlinked accessible for immediate use (on demand, as required, within digital repositories) (Cook, 2014; Goh, 2016d); the use of low cost and free online tools and platforms, like Blogger (Goh, 2016h), Padlet (Goh & Sandars, 2016) and Instagram (Goh, 2016b), used exclusively for professional training purposes, following best practices, local and international guidelines and rules governing professionalism, protecting privacy, and respecting intellectual property. The focus is always on the quality, usability and usefulness of content (first), and our instructional purpose/learning objectives, our

pedagogical intention, before searching for the lowest cost, easiest to use, and most accessible technological solution (T. Taveira-Gomes, P. Ferreira, I. Taveira-Gomes, Severo, & M. A. Ferreira, 2016), supported by best practices (empirical based and supported by the literature) in instructional design. These instructional practices may not use any technology (Goh, 2017) at all, or time tested "old-school" tech of microphones, paper and pen, chalk and a blackboard; or their online digital versions. TeL adds value by helping students, teachers, and administrators/funding agencies/parents "see what we actually teach with, and assess on" (Goh, 2016h), and makes the learning process and outcomes visible (Goh, 2016g) and increasingly measurable (Goh, 2016a), through data analysis and data analytics (see tip 10 on linked article [Rouhiainen, 2015]). Scholarly teaching, and educational scholarship can also be promoted through the use of online digital portfolios (Goh, 2016f), making our efforts as educators visible, accessible, and assessable; for colleagues and peers to critique, give feedback on, and add to our work. To sum up, technology can augment, amplify, enhance, expand and extend our educational efforts as teachers, making useful content accessible; and assisting active learning activities which when done online are easily visible, as well as accessible for more rapid feedback and review. Making regular, incremental efforts to add to our educational content, and refine our learning processes is not only low cost, but also cost effective, particularly when low cost or free online tools and platforms are used skilfully and thoughtfully by teachers with a strong foundation of pedagogical knowledge and understanding of the theory and practice of instructional design; working with an ever increasing repertoire and repository of reusable digital content and teaching plans; which are made easily available for a teacher, as well as a larger teaching community to use through an indexed, peer and user reviewed, online digital repository; where not only highly viewed, rated, cited to, linked to, and downloaded material; but also all potential usable and useful material is visible, and accessible; to be used, reused, repurposed, and added to.

### Notes on Contributors

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## Declaration of Interest

The author declare no competing interests.

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