Abstracts annotated bibliography examples

Technology, Internet

Browne, L. L., Mehra, S. S., Rattan, R. R., & Thomas, G. G. (2004). Comparing lecture and e-learning as pedagogies for new and experienced professionals in dentistry. British Dental Journal, 197(2), 95-97. doi: 10. 1038/sj. bdj. 4811484

Objective: To evaluate the relative effectiveness of e-learning versus lecture learning in VDPs and trainers. Design: Experimental comparison of two groups'learning retention. Setting: VDPs and trainers from two regions were assessed by independent researchers. Method: One region's VDPs and trainers received e-learning; another's received a traditional one hour lecture. Retention and understanding were tested and compared. Personal preference was assessed in group interviews. Results: Significantly greater retention for the trainees occurred from lecturing rather than e-learning, and for the trainers e-learning was significantly more successful than lecturing. Conclusions: Small numbers in this study preclude wide generalisation. However, the results point to the benefits of face-to-face interaction for inexperienced staff, and the benefits of the speed and manageability of e-learning for busy, more experienced staff. The need for a discussion facility to be incorporated into ICT innovations to CPD (via, for example, online 'chatrooms') is also highlighted, with the potential of greatly enhancing e-learning efficacy.

Blake, H. (2009). Staff perceptions of e-learning for teaching delivery in healthcare. Learning In Health & Social Care, 8(3), 223-234. doi: 10. 1111/j. 1473-6861. 2009. 00213. x

Background Web-based e-learning methods are increasingly used in higher education to support learning in pre- and post-registration healthcare

subjects. Although new technologies are central to teaching and learning strategies, e-learning is not currently accepted universally by academic staff. Aim The aim of the study was to determine the attitudes towards and use of e-learning among academic staff in nursing and midwifery. Methods A questionnaire survey was completed by 102 teaching staff to determine their opinions towards and use of e-learning in teaching. Results Staff opinions were divergent with most acknowledging the benefits of e-learning but many also expressing concerns over barriers such as lack of time, resources or technical support. Staff did not fully utilize the range of technologies available. Conclusion Most staff exhibited positive attitudes towards the pedagogical value of technology in teaching and learning, though some remained hesitant or lacking in confidence to embark on e-learning teaching developments or delivery. Barriers exist that may be partially addressed through better understanding of e-learning tools and their potential application, and additional support and resources. E-learning strategies need to focus on improving staff awareness of e-learning methods to supplement rather than replace traditional teaching methods, while providing ongoing support and mentoring for development and delivery, technological training and incentives for staff involvement.

Neuhaus, K. W., Schegg, R. R., Krastl, G. G., Amato, M. M., Weiger, R. R., & Walter, C. C. (2008). Integrated learning in dentistry: baseline data and first evaluation at the Dental School of Basel. European Journal Of Dental Education, 12(3), 163-169. doi: 10. 1111/j. 1600-0579. 2008. 00513. x

Introduction: Integrated learning modules were introduced and baseline information was collected, in order to identify the expectations regarding e-

learning. Furthermore, first formative evaluation of fourth-year dental students was conducted and the experience gained with summative online assessment was reported. Methods: Questionnaires designed by Infratest dimap (Berlin, Germany) were distributed to undergraduate students (n = 72) of the School of Dentistry. The fourth-year dental students went through a preliminary evaluation process. An online test was evaluated and compared with a traditional examination. Results: Sixty-three questionnaires were returned. Sixty-five per cent of the students were already familiar with e-learning. All but one student owned at least one personal computer or laptop. Ninety-one per cent of the students expected positive effects from the integration of online modules. Enhanced flexibility regarding time and location as well as comfortable access to learning materials were mentioned most frequently. Ninety per cent of the students expected to achieve better results by finding it easier to understand learning materials produced with multimedia tools. Sixty per cent of the students feared technical complications when using an online platform. The online test was successfully performed. A formative evaluation process demonstrated agreement between expectations and first experiences with e-learning. Conclusions: Most students expect the quality of their studies to improve by implementation of e-learning. Students appreciating regularly updated learning materials particularly emphasise the importance of its visualisation. Online tests might be an option for student’s self-performance rating.

Chen, M., Su, Z., Wu, T., Shieh, T., & Chiang, C. (2011). Influence of Dentistry Students' e-Learning Satisfaction: A Questionnaire Survey. Journal Of Medical

Systems, 35(6), 1595-1603. doi: 10. 1007/s10916-010-9435-x

Dental school graduates operating on patients without having had sufficient practice in school is potentially dangerous to the patients. In order to minimize this danger, it is necessary to establish a virtual learning environment for students. In this study, we incorporated DentSim, a clinical dentistry simulator, into an e-Learning platform. In addition to overcoming the time and space constraints on learning, DentSim can simulate clinical conditions. It also allows students to practice reading case histories and inspecting and diagnosing patients. To construct the research model for this study, we incorporated the four major factors for measuring e-Learner satisfaction-'learner interface', 'learning community', 'content' and 'personalization' with the variable of 'intention to use'. The subjects were 350 dental students studying at the College of Oral Medicine. The structural equation modeling (SEM) results showed that Factors that influenced 'intention to use' include 'learner interface', 'learning community' and 'personalization', and 'intention to use' affect 'e-Learner satisfaction' with the system.

Bains, M. M., Reynolds, P. A., McDonald, F. F., & Sherriff, M. M. (2011). Effectiveness and acceptability of face-to-face, blended and e-learning: a randomised trial of orthodontic undergraduates. European Journal Of Dental Education, 15(2), 110-117. doi: 10. 1111/j. 1600-0579. 2010. 00651. x

This study compared e-learning (EL), face-to-face learning (F2FL) and blended learning (BL) with respect to their effectiveness and student attitudes towards them. It also evaluated the effect of the order in which the components (EL and F2FL) of blended learning are delivered. This was a

prospective cluster randomised trial comparing four parallel groups. Eight groups of fourth year dental undergraduate students were randomly allocated to one of four intervention groups: EL, F2FL, BL1 or BL2. These four groups were assessed for their baseline comparability of knowledge and skills. Each then received the same cephalometric tutorial but delivered by the allocated mode of learning. Effectiveness was immediately assessed with a MCQ which measured short-term recall of knowledge. Student attitudes were evaluated with a questionnaire followed by a focus group discussion. Ninety (57%) students completed the study. Pearson's chi-square test found no statistically significant difference between F2FL and BL; EL alone was less effective (P < 0. 05) for four MCQ questions but with no difference for the remaining six questions. Overall students were positive towards each learning modality, but a one-way analysis of variance found BL was the most and F2FL was the least accepted (P = 0. 002). EL was significantly (P = 0. 028) less preferred. The order of the components in BL had no significant effects. These results suggest that BL is more likely than either F2FL or EL alone, to be both effective and accepted when delivering cephalometric education to undergraduates. Reynolds, P. A., Rice, S. S., & Uddin, M. M. (2007). Online learning in dentistry: the changes in undergraduate perceptions and attitudes over a four year period. British Dental Journal, 203(7), 419-423. doi: 10. 1038/bdj. 2007. 896Objective To assess the changing perceptions and attitudes of undergraduate dental students towards e-learning between 2001-2004. Design, sample and setting This was a retrospective analysis of online questionnaire data, collected from four successive cohorts of final year students undertaking an online

therapeutics course in a large teaching hospital. Methods Students were required to complete a structured and open questionnaire relating to their perceived ICT skills, the course itself, and their perceptions of e-learning. Simple numeric qualitative and qualitative analyses were applied. Results Questionnaires were returned by 328 students (98% response rate). Students' perceptions of having advanced ICT skills increased from 5. 5% to 14. 5%, with home internet access rising from 62. 3% to 89. 1 % (2001-2004). There was an increase in: ease of access (25. 3% to 47. 3%), perception of time saving (17. 9% to 37. 4%), appreciation of combining traditional and e-learning methods (43. 8% to 57. 4%) and online tutor access (21. 9% to 40. 7%). Free comments supporting good e-learning experiences rose from 7. 2% to 32. 7% with poor remarks decreasing (3. 1% to 1. 9%). Conclusions Students' perceptions of their ICT skills has increased, matched by better equipment and greater appreciation of e-learning. A shift towards preference of a blended approach of traditional and e-learning is evident. Nattestad, A., Attstrom, R., Matteos, N., Ramseier, C., Canegallo, L., Eaton, K., & Goffin, G. (2002). 4. 1 Web-based interactive learning programmes. European Journal Of Dental Education, 6127. In the future, the training of competent dentists will need to take advantage of up-to-date digital technologies and learning practices. In order to accomplish this, the following goals should be considered: i) the design of 'customizable' web-based curriculum matrices that accommodate the training philosophies and resources of individual dental schools; ii) the development of digital instructional modules that can be incorporated or downloaded into specific parts of a curriculum; iii) the establishment of an e-consortium, which

provides peer view and guidance in the design of teaching modules, and which is responsible for the storage, maintenance, and distribution of teaching modules within the consortium; iv) the development of central human and physical resources at each dental school to enable the seamless delivery of instructional modules in a variety of learning environments; and v) the assessment and provision of ICT training to students and faculty with respect to the use of computers and related digital technologies and educational software programmes. These goals should lead to the creation of a 'virtual dental school'. Within this project summative and formative evaluations should be performed during both the production and development of teaching material (e-learning material) and the learning process. During the learning process the following aspects should be measured and evaluated: i) students' behaviour; and ii) effectiveness, retention and the transfer of e-learned material into the clinical situation. To obtain evidence of the efficacy of e-learning material a certain amount of research has to be done in the near future. It is suggested that all parameters currently known have to be implemented during the development of a learning programme.

Ellaway, R. (2008). AMEE Guide 32: e-Learning in medical education Part 1: Learning, teaching and assessment. Medical Teacher, 30(5), 455-473.

In just a few years, e-learning has become part of the mainstream in medical education. While e-learning means many things to many people, at its heart it is concerned with the educational uses of technology. For the purposes of this guide, we consider the many ways that the information revolution has

affected and remediated the practice of healthcare teaching and learning. Deploying new technologies usually introduces tensions, and e-learning is no exception. Some wish to use it merely to perform pre-existing activities more efficiently or faster. Others pursue new ways of thinking and working that the use of such technology affords them. Simultaneously, while education, not technology, is the prime goal (and for healthcare, better patient outcomes), we are also aware that we cannot always predict outcomes. Sometimes, we have to take risks, and 'see what happens.' Serendipity often adds to the excitement of teaching. It certainly adds to the excitement of learning. The use of technology in support of education is not, therefore, a causal or engineered set of practices; rather, it requires creativity and adaptability in response to the specific and changing contexts in which it is used. Medical Education, as with most fields, is grappling with these tensions; the AMEE Guide to e-Learning in Medical Education hopes to help the reader, whether novice or expert, navigate them. This Guide is presented both as an introduction to the novice, and as a resource to more experienced practitioners. It covers a wide range of topics, some in broad outline, and others in more detail. Each section is concluded with a brief 'Take Home Message' which serves as a short summary of the section. The Guide is divided into two parts. The first part introduces the basic concepts of e-learning, e-teaching, and e-assessment, and then focuses on the day-to-day issues of e-learning, looking both at theoretical concepts and practical implementation issues. The second part examines technical, management, social, design and other broader issues in e-learning, and it ends with a review of emerging forms and directions in e-learning in medical

education. 'It is through education that the daughter of a peasant can become a doctor, that the son of a mineworker can become the head of the mine, that the child of farm workers can become the president of a great nation' (Nelson Mandela, 1994).

Hadengue, V. (2005). E-learning for information literacyA case study. Library Review, 54(1), 36-46. doi: 10. 1108/00242530510574147

Purpose – To describe a Swiss Virtual Campus project in which an internet-based computer-assisted learning (CAL) package for students in economics and indentistry was developed. Design/methodology/approach – A case study account of a CAL package implementation against a rigorous and well-thought-through pedagogic framework. Findings – The paper shows that it is possible to use a CAL package effectively to promote information literacy both on campus and to a distance learning community of students as an accredited form of learning activity, thus showing how e-learning is suitable for the promotion of information literacy both to full-time students and to those engaged in lifelong learning in the context of professional practice. Research limitations/implications – The case study approach gives a useful structured account of the development process of a library CAL package, with implications for the application of well-developed pedagogic models in other e-learning contexts. Practical implications – The paper offers a clear model for the successful implementation of e-learning models in information literacy practice. Originality/value – The paper establishes the value of having a clearly developed pedagogical framework together with sophisticated technical e-learning platforms as practical.

Beaumont, A. (2005). Implementation of e-learning and the teaching hospital: a local perspective. Health Information & Libraries Journal, 2266-70. doi: 10. 1111/j. 1470-3327. 2005. 00609. xmeans of effectively promoting and enhancing student use of information resources across a virtual campus.

The article focuses on the delivery and implementation of e-learning within a teaching hospital in Great Britain and the involvement of the library service within the process. At Lancashire Teaching Hospitals NHS Foundation Trust, the Knowledge and Information Group is responsible for the delivery of the e-learning. The delivery of e-learning strategy serves as an opportunity to develop collaboration between different educational and training groups within the Trust. Library services provide support in the delivery of education programs and trained library staff to facilitate and use e-learning programs effectively.

Mattheos, N. N., Stefanovic, N. N., Apse, P. P., Attstrom, R. R., Buchanan, J. J., Brown, P. P., & Thomas, H. F. (2008). Potential of information technology in dental education. European Journal Of Dental Education, 1285-92. doi: 10. 1111/j. 1600-0579. 2007. 00483. x

The use of information technology (IT) in dentistry is far ranging. In order to produce a working document for the dental educator, this paper focuses on those methods where IT can assist in the education and competence development of dental students and dentists (e. g. e-learning, distance learning, simulations and computer-based assessment). Web pages and other information-gathering devices have become an essential part of our daily life, as they provide extensive information on all aspects of our

society. This is mirrored in dental education where there are many different tools available, as listed in this report. IT offers added value to traditional teaching methods and examples are provided. In spite of the continuing debate on the learning effectiveness of e-learning applications, students request such approaches as an adjunct to the traditional delivery of learning materials. Faculty require support to enable them to effectively use the technology to the benefit of their students. This support should be provided by the institution and it is suggested that, where possible, institutions should appoint an e-learning champion with good interpersonal skills to support and encourage faculty change. From a global prospective, all students and faculty should have access to e-learning tools. This report encourages open access to e-learning material, platforms and programs. The quality of such learning materials must have well defined learning objectives and involve peer review to ensure content validity, accuracy, currency, the use of evidence-based data and the use of best practices. To ensure that the developers' intellectual rights are protected, the original content needs to be secure from unauthorized changes. Strategies and recommendations on how to improve the quality of e-learning are outlined. In the area of assessment, traditional examination schemes can be enriched by IT, whilst the Internet can provide many innovative approaches. Future trends in IT will evolve around improved uptake and access facilitated by the technology (hardware and software). The use of Web 2. 0 shows considerable promise and this may have implications on a global level. For example, the one-laptop-per-child project is the best example of what Web 2. 0 can do: minimal use of hardware to maximize use of the Internet structure. In essence, simple

technology can overcome many of the barriers to learning. IT will always remain exciting, as it is always changing and the users, whether dental students, educators or patients are like chameleons adapting to the ever-changing landscape.

Gray, K., Annabell, L., & Kennedy, G. (2010). Medical students' use of Facebook to support learning: Insights from four case studies. Medical Teacher, 32(12), 971-976. doi: 10. 3109/0142159X. 2010. 497826

Background: Recent research indicates that university students are interested and active in supporting their learning by using Facebook, a popular social networking website. Aim: This study aimed to add to our understanding of how or how effectively students may be using Facebook for this purpose. Method: Researchers surveyed the extent and key features of Facebook use among 759 medical students at one university, and explored in depth the design and conduct of four Facebook study groups. Results: 25. 5% of students reported using Facebook for education related reasons and another 50. 0% said they were open to doing so. The case studies showed conservative approaches in students' efforts to support their development of medical knowledge, skills and attributes in this way. Both technological affordances and group dynamics were factors contributing to groups' mixed successes. Conclusion: These cases indicate that using Facebook as part of learning and teaching is as much of a challenge for many students as it may be for most educators.

Khan, N., Coppola, W., Rayne, T., & Epstein, O. (2009). Medical student access to multimedia devices: Most have it, some don't and what's next?. Informatics For Health & Social Care, 34(2), 100-105. doi: 10.

1080/17538150902779550

In recent years, the rise in total student intake of medical schools across England has not been met by an increase in medical teachers. Computer aided learning(CAL) has the potential to address this disequilibrium. We conducted a survey of clinical medical students at our institution to ascertain the level of access to media devices capable of delivering vision and/or audio. The aim was to establish a baseline to assist CAL providers plan for appropriate modes of content delivery. A questionnaire was emailed to all clinical medical students at UCL. To validate the email survey, an identical paper questionnaire was distributed to a compulsory class for third year clinical medical students. The e-questionnaire and validation questionnaire response rate was 46 and 100% respectively. Eighty-six percent of students had home access to broadband Internet, and 85% of home computers were suitable for a full multimedia experience. Seventy-four percent of students indicated that their primary place of access was at home. Sixty-three percent of students had portable MP3 devices and over 50% owned an iPod. The hardware environment appears favourable for the introduction of complex multimedia teaching programs to medical students, but access is not universal. In addition to personal computers, inexpensive portable multimedia players might offer the opportunity to deliver 'on demand' learning. Medical schools planning for delivery of CAL should consider student access to desktop and portable media devices when designing an e-learning curriculum.