

Current literature

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An annotated bibliography of articles relevant to the study and use of the Internet in the healthcare environment.

Colbert JT et al. Using the Web to encourage student-generated questions in large-format introductory biology classes. *CBE Life Sci Ed* 2007; 6:42–48

This study examines how students respond to the option of posting course-related questions on an online message board. Background research showed that effective questioning aids teaching and learning, however in large classes many students are reluctant to ask questions, or ask questions not related to the course content. Three terms of an undergraduate biology module were studied. The students were given an incentive of extra module credit if they posted appropriate questions online; results were given within 24 hours, and they were able to view the questions posted by other students. Outcomes assessed included whether: (i) the students read the answers to their questions – only 3.7% never read the answers to their questions; (ii) they looked at questions posted by other students – 75% of students responded positively to this question, including those who asked no questions themselves; and (iii) this activity aided their learning – 60% said that it did aid their learning. All in all, the study found a favourable result; 80% students asked at least one question, and were interested in the questions asked by their peers, and compared to typical questioning in large-format classes, a lot more questions were asked online, and a more diverse group of students asked questions.

Cutrone M, Grimalt R. Dermatological image search engines on the Internet: do they work? *J Eur Acad Derm Ven* 2007; 21: 175–177

The authors looked at clinical images available online, and whether they are a suitable alternative to image atlases online or on CD. Seven search engines were used to search for three dermatological diseases, and they were judged on the number of images found, whether the images corresponded with

the disease diagnosis (this was for the first 30 results only), and whether there were any advertisements or pharmaceutical links displayed with the image. Google and Yahoo provided the highest number of results, almost all provided the correct diagnostic image, and none of the images found had any advertising or pharmaceutical links. However, the authors question copyright issues associated with these images, which are often not original to the site listed on the search engine, but they veer towards the opinion of fair use of these images for teaching purposes in 'not-for-profit educational institutions'. Online image search engines appear to be a valuable, free resource for obtaining dermatology images.

Herskovic JR et al. A day in the life of PubMed: analysis of a typical day's query log. *J Am Med Inform Assoc* 2007; 14: 212–220

This study aimed to identify how users search on PubMed with the view of future improvements in the information retrieval strategy of the database. Of interest were query length, search strategies, Boolean operators used, common search terms, and whether the queries were informational (searching for a specific topic) or navigational (searching for bibliographic detail). Data were taken from a 24-hour period. Three-quarters of the queries were informational. The most popular search words (highest = Cancer), search topics (highest = Chemicals and Drugs), and clinical topics (highest = Pathological conditions, signs and symptoms) were determined. Sessions per user consisted of one or more queries, and these were used to study search strategy. The results show that there was a low usage of MeSH terms, and only ~11% of queries used Boolean operators. Users preferred short queries, with results demonstrating a median of three terms per query. In a future study, the authors would like to obtain data which show the results users have clicked on to help develop a

ranking system which lists the most relevant results first. This study should help refine the PubMed interface, and that of other biomedical information retrieval tools.

Mangunkusumo RT et al. Feasibility, acceptability, and quality of Internet-administered adolescent health promotion in a preventive-care setting. *Health Educ Res* 2007; 22: 1–13

This randomised controlled trial aimed to assess how satisfactorily an Internet-based preventive health procedure performed as compared to a current procedure of printed questionnaires (P&P). Outcomes were feasibility, acceptability and quality of contents. Students from seven secondary schools in rural and urban areas were assigned to the Internet or P&P group, and completed a health-behaviour questionnaire either on the Internet or on paper. The questionnaire included questions on respiratory problems, smoking and fruit consumption. On completion, the Internet group received tailored feedback about fruit consumption, and the P&P group received general printed advice on fruit consumption, and students with an 'increased health risk' were sent for a health consultation. Feasibility: the duration of the assessment and consultation were similar; both groups read the fruit advice, although assessment via the Internet was deemed to be 'easier', and electronic fruit advice was more 'pleasant'. Acceptability: both groups were satisfied with their type of media, and with the consultations. Quality of contents: the number of referrals and self-referrals did not differ significantly between groups; although the electronic fruit advice was 'more personally relevant', they generally preferred the printed fruit advice. This study appears to show that Internet provision is neither superior nor inferior to current preventive health procedures and, therefore, be used to provide adolescent health promotion.