On-line Resources for a WWW-based Continued Education Curriculum on Behavioral Neurobiology

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Java-based on-line academic control and virtual classroom interfaces based on the WWW paradigm are used to implement a course on behavioral neurobiology for clinicians

INTRODUCTION AND AIMS

Recently educators began to challenge the adequacy of tradicional model for learning. With Internet, new paradigms have appeared and its staggering possibilities are capturing the interest of educators around the world, leading them to rethink the nature of medical teaching and learning [1]. Recent technological developments in Internet services, such as video-conferencing, streaming media, distributed and database systems, etc., have made possible the partial or integral substitution of many activities and functions of conventional courses by its network-based counterparts [2].

The aim of the present work is to develop an on-line continued education course on human behavioral neurobiology, geared toward the practicing clinician (neurologists, psychiatrists, etc.), using advanced concepts and technologies for delivery and interaction via the World Wide Web. The aim of the course is to provide the learner with a review of the basic aspects of structure and function of the brain, as well as updated information on its clinical implications.

MATERIAL AND METHODS

The course is implemented in the form of a set of hypertext pages available on the World Wide Web, which gives access to its internal structure and sequencing of modules. Each module has a number of on-line resources, such as papers, lecture notes, electronic journals and multimedia books, lists of WWW sites, slide shows (with and without RealAudio narration), videoclips, down-loadable software, Java-based interactive simul-ations and quizzes. In addition, a module has also a set of general and educational objectives, a list of mandatory and elective assignments and a description of the best steps, activities and resources the learner is recommended to follow when studying for the module. Interaction with the tutors is provided in asynchronous mode via e-mail links and a discussion list or newsgroup; and a WWW-based interactive virtual classroom interface, using a Java applet.

Academic control is achieved via a mixture of server-side and client-side programs (using CGI and Java applets and servlets), which gives password-protected access to the course and its modules, maintains a database of the learner's progress and assignment completion, grades, etc.

RESULTS AND CONCLUSIONS

Presently the technological infrastructure for the distance course and the learning modules are completed and structured, and the first real-world trial is under way. The novel aspects of the present work reside mainly in the implementation of module completion control software, thus decreasing the problems we had detected in a previous pilot trial of the technological resources, particularly the "chat" interface and the ad-libitum nature of course offerings.

The technical characteristics and educational approach and strategies devised for the course can be considered appropriate and highly effective for providing student-centered learning via the WWW, particularly when the difficulties of offering this course to a wide, large and geo-graphically-dispersed audience are considered.

References

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