Addictive Links: Engaging Students through Adaptive Navigation Support and Open Social Student Modeling

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ABSTRACT

Empirical studies of adaptive annotation in the educational context have demonstrated that it can help students to acquire knowledge faster, improve learning outcomes, reduce navigational overhead, and encourage non-sequential navigation [1]. Over the last 8 years we have explored a lesser known effect of adaptive annotation – its ability to significantly increase student engagement in working with non-mandatory educational content. In the presence of adaptive link annotation, students tend to access significantly more learning content; they stay with it longer, return to it more often and explore a wider variety of learning resources. This talk will present an overview of our exploration of the *addictive links* effect in many course-long studies, which we ran in several domains (C, SQL and Java programming), for several types of learning content (quizzes, problems, interactive examples). The first part of the talk will review our exploration of a more traditional knowledge-based personalization approach [2; 3] and the second part will focus on more recent studies of social navigation and open social student modeling [4; 5].

Categories and Subject Descriptors

H.5.2 [**User Interfaces**]: *Graphical user interfaces (GUI);* H.5.4 [**Hypertext/Hypermedia**]: *Navigation*.

Keywords

Navigation support, engagement, personalized learning, open student model, social learning.

BIOGRAPHY

Peter Brusilovsky has been working in the area of adaptive systems and E-Learning for many years. Since 1993 he has participated in the development of several adaptive Web-based educational systems including ELM-ART, a winner of 1998 European Academic Software Award. He was involved in developing practical E-Learning courses and systems as a Director of Computer Managed Instruction at Carnegie Technology Education, one of the first E-Learning companies in the USA. Currently he continues his research on adaptive E-Learning as a Professor of Information Science and Intelligent Systems at the University of Pittsburgh. Dr. Brusilovsky has published numerous research papers and several books adaptive systems and E-Learning. He is the Editor-in-Chief of IEEE Transactions on Learning Technologies and a board member of several other journals. He is also the immediate past President of User Modeling Inc., a professional organization of user modeling researchers.

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