Wiki Uses in Teaching and Learning

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ABSTRACT

Faculty from five universities will discuss their groups' respective teaching and learning wikis. The group assembled here represents several divergent approaches and projects to harnessing the collaborative and open-source nature of Wikis to the tasks of teaching, educating inquiry and training.

We will discuss and compare Wiki projects that cover diverse methods and content fields. Projects include secondary, undergraduate, and graduate level courses. Systems we describe address groups varying in size from roughly a dozen to hundreds of students. We approach the ontology and pedagogy of Wiki-based educational materials drawing on cognitive and social constructivism, a theory of inquiry-based learning, and an interest in information markets and online sharing dynamics. Projects included in this panel have received financial support from a variety of granting agencies, including the Israeli Internet Association, U.S. National Science Foundation, the GVU Center at Georgia Institute of Technology, SHOHAM at The Open University of Israel, and InfoSoc at the University of Haifa.

We created and now study widely different implementations of Wiki usage in education that reflect a variety of instructional approaches. In all of the projects we have completed at least one cycle of use, and can therefore report on outcomes that include user feedback, reactions and satisfaction; impact on learning; impact on grade; non-obtrusive measures of usage patterns; and external measures of quality of the content generated and preserved. Our findings address the issues of design considerations, multilingual and multicultural content, group dynamics, evaluation and quality control. We wish to use this panel to share lessons learned and discuss a variety of usage modes, in search of "best practice" models as well as share lessons learned that apply to future modifications and additions to the code.

ACM Classification or Categories & Subject Descriptors: Theory, Management, Human Factors

General Terms

Theory, Management, Human Factors

This panel represents the work of the following researchers. Names of the designated speakers are asterisked:

- Yaron Ariel, InfoSoc, Univ. of Haifa, Israel

- Dani Ben-Zvi, School of Education, Univ. of Haifa, Israel (*)

- Amy Bruckman, GVU Center, Georgia Tech, USA

- Andrea Forte, GVU Center, Georgia Tech, USA (*)

- Yael Kali, Education in Technology and Science, Technion, Israel (*)

- Michael Konja, School of Education, Univ. of Haifa, Israel

- Rachel Levin-Peled, Education in Technology and Science, Technion, Israel

- Hagit Meishar-Tal, Education Technology and Learning and the Chais Research Center, Open University, Israel

- Sheizaf Rafaeli, InfoSoc (Center for the Study of the Information Society) and School of Management, Univ. of Haifa, Israel (*)

- Gilad Ravid, Industrial Engineering, Ben Gurion University, Israel (*)

- Edna Tal-ElHasid, Shoham, The Center for Integrating Technology in Distance Education Open University of Israel (*)

Yaron Ariel is a Ph.D. candidate at InfoSoc, the Center for the Study of the Information Society, at the University of Haifa. His research interests and previous publications are in online communities, and the interaction processes associated with information exchange.

Dr. Dani Ben-Zvi is a faculty member at the Faculty of Education in the University of Haifa. He is the head of the Innovative Technologies in Education Graduate Program.

Dr. Amy Bruckman is Associate Professor at the College of Computing at Georgia Tech, and a member of the Graphics, Visualization, and Usability (GVU) Center. She received her PhD from the Epistemology and Learning Group at the MIT Media Lab in 1997, and her BA in physics from Harvard University in 1987. She does research on online communities

and education, and is the founder of the Electronic Learning Communities (ELC) research group. Her research applies the "constructionist" philosophy of education to the design of online communities.

Andrea Forte is a fourth-year Ph.D. candidate specializing in human-centered computing at Georgia Tech's College of Computing. Her current research focuses on written communities of discourse and social contexts for learning through writing. By creating environments where students' work becomes a resource for others, she believes we can create more authentic learning experiences. Andrea holds an MLIS from the Graduate School of Library and Information Science (now School of Information) at the University of Texas at Austin and a BA in foreign language and literature from Western Michigan University.

Dr. Yael Kali is a faculty member at the Education in the Science and Technology Department at the Technion in Israel. The group she is leading at the Technion focuses on design-principles for educational technologies, and studies how technology enhanced learning environments affect student learning at different age levels (middle-school to higher-education). Kali is a co-principle investigator in the NSF-funded TELS (Technology Enhanced Learning in Science) center, in which she develops the Design Principles Database, and studies its contribution to the Learning Sciences and Design communities.

Michael Konja is graduate student in the Innovative Technologies in Education Program. His research focuses on the effectiveness of Wiki collaborative learning environments in higher education level.

Rachel Levin-Peled is a PhD candidate, at the Education in the Science and Technology Department at the Technion in Israel. Her research focuses on constructivist and socio-cultural aspects of online learning in higher education, and on design principles that synthesize and guide the design of academic courses.

Hagit Meishar-Tal is a PhD student in the Department of Geography at Haifa University, working on a thesis entitled: 'The Internet and The Dynamic of Social Space'. She received a

Bachelor's degree with Honors in Philosophy and International Relations at Hebrew University, Jerusalem, and a Master's degree with Honors in History and Philosophy of Science at Tel Aviv University. She recently participated in OII SDP 2005 (Oxford Internet Institute Summer Doctoral Program 2005). She teaches at the Open University of Israel in the MA program in Education (Technology and Learning) and she is also a member of Chais Research Center for the Integration of Technology in Education.

Dr. Sheizaf Rafaeli (PhD Stanford University) is Director of the Center for the Study of the Information Society and Professor at the Graduate School of Management, University of Haifa, Israel. His interests include information sharing and the value of information, mediated interaction, synchronicity, simulations, online behaviour, groups and decision making. He has taught in numerous universities in Israel, Europe and the US, including the Hebrew University of Jerusalem, Stanford University and the University of Michigan. He is coauthor of Network and Netplay (MIT Press) and co-founder of the Journal of Computer-Mediated Communication.

Dr. Gilad Ravid (BSc in Agricultural Engineering, Technion; MBA with specialization in Management Information Systems and Operations Research, Hebrew University of Jerusalem, and Ph.D. University of Haifa, Israel) is a faculty member in the Industrial Engineering faculty at the Ben Gurion University of the Negev, Israel. He also served as a lecturer at the Hebrew University of Jerusalem and the Ruppin Institute. Gilad has published in the areas of distance education, supply chain management simulations and group online communication.

Edna Tal-Elhasid is the head of the Instructional Design Group at Shoham, The Center for integrating technology in Distance Education at the Open University of Israel. She is also a member of Chais Research Center for Integration of Technology in Education at the Open University of Israel. She received her Bachelor's degree in Mathematics and Computer Science at Haifa University Israel, and a Master's degree in Information and Communication Technologies in Education at Tel Aviv University Israel.