
EDITORIAL

In this issue, we publish five articles and one case study. Due to the time it took for reviews to be completed and articles accepted, we had to combine issues 1&2 of Volume 3.

In the first article, Phillip Wankat discusses how many faculty members design courses based on their “seat of the pants” feeling for what improves learning, rather than the scientific knowledge base that has been built up over the years about how students learn. He suggests ways to make classes more interesting and provides a list of tips that have worked well at different educational settings. He points out that excellent teachers have a combination of content knowledge, general pedagogical skills, and pedagogical content knowledge for their discipline.

Marsh Faber explains how Agilent Corporation is working with educators to further engineering education. He discusses how devising a compact lab experiment that holds students’ interest while teaching something of substance can be a real challenge. He also reveals that the experiments submitted to the company by universities had differences in quality, indicating that universities vary considerably in the emphasis they place on the undergraduate laboratory learning experience. He closes by considering how the new experiments developed for the project will enhance the ABET’s focus on hands-on work.

Sydney Rogers from the Nashville State Technical Community College describes how technological case studies can be an excellent vehicle for learning content. She stresses how case studies should be integrated early in a program of study and continue throughout the program.

Joseph Herdt presents a case study that describes the development and implementation of a secure information distribution network for the Cape Canaveral Air Force Station’s Global Command and Control System (GCCS). GCCS is the principal migration path for global defense command and control systems, effectively replacing the existing classified and sensitive communication system. The conclusions drawn from this study outline key issues regarding the implementation of such a network. We expect this case study to be very relevant given the increased emphasis on secure information distribution systems.

In the next article, Ruby Mawasha, Paul Lam, Okechukwu Ugweje, and Tirumalai Srivatsan discuss an undergraduate research program in the SMET area that provides the students with a peer support network, a collaborative learning environment, hands-on research activities, and a model to inspire and maintain their commitment to high academic and career standards in research. The students gained research experience by working alongside graduate students and mentors on major research projects. The authors expect that this research program can be used as a model by other institutions and programs.

We had a unique opportunity on June 17, 2002, at the American Society for Engineering Education Conference at Montreal, Canada, to meet with fellow editors of engineering education journals. The meeting was attended by editors of the Journal of Engineering Education, IEEE Transactions on Education, the International Journal of Engineering Education, Chemical Engineering Education, the European Journal of Engineering Education, and International Engineering Digest. This meeting gave us an opportunity to compare the similarities and differences in the missions of each of these journals. We also discussed the important role our publications play in highlighting significant educational innovations in the engineering and technology education areas. Issues such as making the journals all-electronic, providing access to abstracts, and charging for electronic articles were discussed extensively. We also discussed opportunities for cooperation among the journals and agreed to continue this dialog through future meetings. We are working with the Editorial Advisory Board members to identify and position the Journal of SMET Education for the future. Please let us know your views and ideas.

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