

COMMUNITIES OF PRACTICE IN ENGINEERING EDUCATION

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Abstract - A university is a learning organization in both the traditional academic and contemporary management senses. The social foundation for learning is clearly established, and there are many contexts that support learning formally and informally. This panel will explore the social contexts, or communities, that are in place or have the potential to enrich the academic environment. Panelists bring unique perspectives on higher education, engineering education and research, and communities.

Index Terms - community of practice, learning organization.

INTRODUCTION

The Academic Bookshelf in the January 2003 issue of the *ASEE Journal of Engineering Education* highlighted two books related to communities of practice [2]: *Cultivating Communities of Practice: A Guide to Managing Knowledge*, by Etienne Wenger, Richard McDermott, and William Snyder [3]; and *The Social Life of Information*, by John Seely Brown and Paul Duguid [1]. These books provide the background for the theme of this panel.

A community of practice is defined as “a group of people who share a concern, a set of problems, or a passion about a topic, and who deepen their knowledge and expertise in this area by interacting on an ongoing basis” ([3], p. 4). The shared message in the books is that knowledge, innovation, and learning are social phenomena. Although these books are largely from an industry perspective, they put forth a conceptual framework that broadly applies to learning and work in higher education. This relevance has been cited by education researchers as well. Teaching communities and learning communities are prime examples.

The status and potential of communities of practice in higher education deserves further exploration. What communities of practice form naturally or intentionally among undergraduate and graduate students? Is there a role for communities of practice in departmental organization? To what extent does a community of practice encourage and facilitate faculty development? What characterizes university collaboration with industry and government as a community of practice? There have been comments that the social fabric of engineering research and education is weak relative to other disciplines or to the past. Is a community of practice a catalyst for or artifact of socialization? Will it lead to reform, or is reform a prerequisite? The objective of this

panel is to explore these and similar questions about community in engineering education.

THE PANELISTS

The panelists bring expertise and experience from the following areas:

- collaboration and cooperation in learning and design;
- teaching and learning communities;
- engineering education;
- program and curriculum assessment;
- university administration;
- engineering research and innovation; and
- communities of practice.

The unique perspectives and diverse views of the panelists will allow the panel to explore a range of issues.

THE PANEL

The panel will begin with an introduction on community by an opening speaker. That will be followed by a brief statement by the panelists on community generally and communities of practice specifically. What does community of practice mean to each of them? Each panelist will then give commentary on the state of community in engineering education (spanning the academic enterprise of teaching, research, and outreach). The moderator will pose questions on the current and potential value of communities of practice in engineering education to facilitate discussion among panelists and the audience. Questions will also be fielded from the audience. Panelists will close with a summary statement focusing on how the community of practice model is likely to impact engineering education.

REFERENCES

- [1] John Seely Brown and Paul Duguid, *The Social Life of Information*, Harvard Business School Press, 2002.
- [2] Diane T. Rover, “A Sense of Community: Learning About Versus Learning To Be,” *The Academic Bookshelf, ASEE Journal of Engineering Education*, 92(1), January 2003, pp. 3-5.
- [3] Etienne Wenger, Richard McDermott, and William Snyder, *Cultivating Communities of Practice: A Guide to Managing Knowledge*, Harvard Business School Press, 2002.

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