Developing a Faculty Consensus on Program Learning Goals and Objectives Using Collaborative Concept Mapping Software

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Developing a collaborative consensus on learning goals and objectives among the faculty of a university department is a critical element in the overall assessment strategy of a program. Not only is this consensus necessary in order to successfully "close the loop" in curriculum assessment and drive real curriculum change, but the enthusiastic buy-in of the entire faculty is central to the development of a collaborative, sustainable, and meaningful curriculum assessment process. While this is a difficult task for departments of any size, developing such a collaborative consensus is even more difficult in broad, interdisciplinary programs that have a large number of faculty with diverse backgrounds.

The Integrated Science and Technology (ISAT) Department at James Madison University (JMU) is such a program, with 45 faculty and an undergraduate student body of approximately 700 students. This unique program empowers students to analyze and solve real-world, human problems by integrating scientific, technological, business, and social aspects of these problems, and to communicate innovative solutions to a diverse audience. The ISAT BS Program prepares students to excel in a complex, technological world by empowering, inspiring, and motivating them to become critical thinkers and lifelong learners able to provide multi-disciplinary solutions to scientific and technological challenges with sensitivity to social, ethical and global considerations.

Administering such a broad, integrated curriculum requires a faculty with a similarly broad set of academic and experiential backgrounds. For example, the 45 faculty in the ISAT department hold 36 different types of terminal PhD degrees. Furthermore, the majority of the faculty have previous work experience in industry, government labs, or non-profit institutions. Developing consensus on the underlying learning goals and objectives of such a broad, interdisciplinary program from among such a large, diverse faculty is clearly an ongoing challenge.

This paper describes the development of a novel technique to obtain collaborative consensus on the learning goals and objectives of this broad, interdisciplinary program. The technique involves the use of internet-based collaborative concept mapping software (Concept Systems Incorporated, Ithaca, NY) to gather unbiased, uniform feedback from every faculty member in the program, and to promote participatory discussions about the underlying learning goals and objectives of the program. Everyone has an equal opportunity to express opinions, openly or anonymously, together or independently. This makes each participant a stakeholder in the process and its outcome. This software-based technique is being used drive the faculty toward a collaborative consensus on program learning goals and objectives, and is being incorporated into an ongoing, sustainable curriculum assessment process. Key learnings and best practices are presented, and examples of how this technique can be adapted for use by others are discussed.