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Chapter XI

Higher Education Culture and the Diffusion of Technology in Classroom Instruction

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Introduction

The diffusion of an innovation takes, on an average, 25 years in an educational setting. Many factors contribute to this slow acceptance rate. Rogers' (1995) theory on the diffusion of innovation and the influence of culture on such diffusion is used to shed light on the causes for this slow diffusion. While not a full explanation of this slow rate of change, this case study shows that the academic culture, within which faculty function, has a strong influence on the diffusion of the use of technology in classroom instruction. This case study provides a point of reference for further study of diffusion of technology in classroom instruction.

This case focuses on a Research I institution in the Midwest that has made a number of commitments to the integration of technology into the curriculum and has channeled many resources into this campaign. While the institution has invested large sums of money in the development of the infrastructure, the rate at which faculty have adopted the use of technology in their teaching has remained low. In order to determine the perceptions of faculty and develop some framework for understanding why the infusion of technology into classroom instruction was so low, faculty members on the campus were interviewed, focus groups were conducted, and meetings between faculty and administrators concerning technology issues were observed. Because additional issues exist with distance education, the scope of this case study research was limited to on-campus classroom instruction and support.

Case Questions

- Do the values and beliefs of academic culture promote or discourage a pro-innovation social climate?
- What aspects of academic culture hinder or promote the diffusion of innovation, specifically, the process for adoption of the use of technology in higher education?
- How do disciplinary differences affect the adoption of technology?
- What roles do faculty play in the diffusion of technology in the classroom?
- What tools and support structures drive successful technology integration into the classroom?

Case Narrative

History of Technological Innovations in Higher Education

As an innovation, technology has been diffusing throughout institutions of higher education since 1946 (Heterick, 1993). Some of the earliest research in higher education resulted in the development of ENIAC at the University of Pennsyl-

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