Characteristics of a Maturing On-Line PhD Program in Technology Management

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Abstract

The creation and development of a Consortium-based Doctor of Philosophy program involving five universities has been a complex process. This complexity is compounded by the delivery of almost all course work via the web while aspiring to standards associated with site-base universities focused on traditional outcomes of research and scholarship. This fifteen year-old PhD in Technology Management Program has undergone maturing processes that have contributed to its stability and growth. Nine characteristics of maturity are addressed in this paper. Currently serving 154 active students across the United States and other countries, this Program is graduating 12 – 14 students each year. The program sees its graduates find jobs in higher education, business and industry, and government.

1. Overview

This Consortium-based PhD in Technology Management Program began in 1998. The program was considered to be a solution to a number of dilemma: 1.) a rapid acceleration in both the pervasiveness and complexity of study of technology in the global community, 2.) a new definition of the essential body of knowledge in various specialization areas, and , 3.) a rapid aging of the membership of the profession (higher education). Therefore, the original objectives of the Program were to: 1.) enhance the level of study in selected technologies, 2.) prepare students to become specialists who can provide leadership in various organizations, 3.) prepare students to provide service to the industrial community, and, 4.) prepare students to become leaders in institutions of higher education. As of spring 2013, the Program has 154 active students and is graduating about 12 – 14 students per year.

The Program was originally proposed to be called a Doctor of Philosophy in Technology degree. Through the proposal development phase and negotiation process with state officials and higher education administrators in the state of Indiana, the Doctor of Philosophy in Technology Management title was ultimately approved. Nine universities participated in the original planning of the degree program. The Consortium was re-sized within a few years of start-up to five university participants. A few universities were non-starters and a few elected to drop-out of the Consortium in the first few years. Since 2002 the Consortium has consisted of Bowling Green State University, East Carolina University, Indiana State University, North Carolina A & T State University, and University of Central Missouri. Indiana State University is the degree-granting university.

The focus of many technology management/engineer management programs across the United States appears to be a blend of the more traditional "research and scholarship" program along with facets of a professional degree. The PhD in Technology Management Program shares this basic characteristic, yet it is unique among approximately two dozen similar PhD programs. This uniqueness is based on the Consortium model for the management and delivery of the program across five universities, and the on-line delivery of most classes. Only two executive-style residency seminars are required on campus.

Curricula topics associated with technology and its impact, and technology management create the content

umbrella of the Program. Students select one of five specialization areas to cover more technical aspects of their study. These areas are: construction management, digital communication systems, human resource development and training, manufacturing systems, or quality systems. Courses that support a student's professional studies may include elective courses or independent studies. Courses in research design and analysis are required. A traditional dissertation is the capstone learning experience required of all students.

2. Maturing Characteristics

As far as doctoral degree-granting programs go, the Consortium-based PhD in Technology Management Program is relatively new. Approaching its fifteen year anniversary, the Program is reflecting on its past as well as planning for the future. Signs of maturation have been emerging. The main data points of maturation include: students, faculty, administrators, curricula/content, policies and processes, research, funding, assessment and impact.

The trajectory of the PhD in Technology Management Program reflects a growing maturity. The planning and start-up of such an effort was successful due to the number and passion of faculty and administrators across many campuses. Their leadership, in part, was focused by a common understanding of the dilemma facing the nature of technology studies, and the impending shortage of technology-related business/industry professionals and higher education faculty. Within this culture of creative problem-solving emerged a solution with buy-in from top administrators and faculty at the respective campuses.

3. Reflection

It must be remembered that the Program was initiated during a time of fairly stable economic conditions at the federal and state level, and prior to 9/11 and the serious economic downturn of the last part of the first decade of the millennia. These events have had an impact on the Program.

Overall, the transformation from a start-up academic consortium-based degree has overcome the changes in university administration, growing faculty instructional loads, and the growing presence of for-profit degree programs. Furthermore, the program had to advertise for students after the first few years of admitting students from informal feeder programs at the undergraduate and master-degree level. In addition as new faculty members, who were not part of the planning process, joined the Consortium, information about the "culture" of the degree program had to be re-worked and re-developed. It became especially important to explain the on-line PhD program and it's "culture" as these faculty were assimilated into the departments and universities that actually paid their salaries. This remains to be an on-going process as does the assessment of individual courses and instructors. . Finally, creating a unique niche among site-based universities to serve part-time students at a distance who wish to study technology management has been filled with rewards for faculty and success for students. For more details, see

http://technology.indstate.edu/consortphd.

References
PH.D. IN TECHNOLOGY MANAGEMENT, http://technology.indstate.edu/consortphd