AC 2011-34: BUILDING A DISTANCE LEARNING HYBRID PROGRAM IN ORGANIZATIONAL LEADERSHIP

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Building a Distance Learning Hybrid Program in Organizational Leadership

Abstract –

In the fall of 2010, under the Purdue University College of Technology's academic Center for Professional Studies in Technology and Applied Research (ProSTAR), was the inaugural program offering of a distance learning hybrid Master of Science degree with an area of concentration in Leadership. This program evolved from the collective experience and knowledge of an intense industry-academia partnership. The program was intentionally differentiated from a traditional MBA-type of program. The program was designed to provide successful transitional training and education to those individuals evolving from an individual contributor technical position to a leadership/management opportunity.

Through a focused and intentional alignment of key courses in three primary areas; leadership, business/technology management and application, the enrolled students are provided the opportunity for discovery, assimilation and subsequent application of acquired knowledge and skills applicable to industrial settings both nationally and internationally. The program has experienced significant enrollment in excess of previously forecasted pro forma expectations, and, is expected to form the foundation for future similar program offering opportunities.

Introduction –

On July 2, 1862, President Lincoln signed into law the Morrill Act [1], named after Justin S. Morrill, a Vermont Representative to Congress, who initially sought congressional approval some 6 years earlier on February 28, 1856. The Morrill Act provided for the grant of land to states based on the number of senators and representatives each state had in congress, hence the nomenclature "land-grant" college or university [2].

Subsequently, on May 6, 1869, Purdue University was officially and legally founded as part of the Morrill Act. Because of political and financial turbulences of the time, Purdue offered its first courses in the fall of 1874 [1].

Purdue maintained a focus on Technology as early as the late 1870s [3]; "…The College of Technology's early roots grew from Purdue disciplines focused on applied learning and engineering principles. …Industrial education students today complete coursework within Purdue's College of Technology and College of Education… [3].

On July 1, 1963, Purdue opted to centralize its applied learning programs into one academic entity; the School of Technology. One year later on July 1, 1964, the Purdue University Board of Trustees approved the formal creation, and subsequent recognition of the Purdue University

School of Technology. In January 2005, the School of Technology was renamed the College of Technology.

Although the exact date is not know, in the Annual Report[4] near early 1990, the Department of Supervision within the College of Technology officially became recognized as the Department of Organizational Leadership and Supervision. This department is the home department of the Leadership concentration program of this paper.

Springer, Bertoline and Schuver (2010), discuss the 2009 recognition by the Purdue University College of Technology to centralize professional studies into a single fully supported academic Center for Professional Studies in Technology and Applied Research (ProSTAR). ProSTAR (as it became approved in 2009), on October 13, 2000, was approved by the full committee of the Indiana Commission on Higher Education (ICHE) to provide a fee-based distance learning Master of Science degree in Technology, versus, the traditional tuition-based on-campus residential program [5].

Program description –

Fall 2010 was the inaugural offering of the weekend program of the Leadership concentration to the College of Technology's Master of Science degree. The first cohort enrollment was in excess of that expected, enrolling a weekend Master of Science program high 32 students. A weekend program offering is a cohort-based program employing a weekend meeting format; meeting from Friday through Sunday. The cohort meets three times a semester, twice in the summer semester, for a total of five semesters (Fall, Spring, Summer, Fall and Spring). After 22 months all members of the weekend cohort format program, who adhere to the graduation requirements for classes taken and GPA, graduate in May as part of the regular Purdue University spring graduation ceremony.

The curriculum of this inaugural Leadership concentration was defined with the collective experiences of academia and industry. Representatives to the curriculum initial discussions were veteran senior employees from two different, yet related industry sectors; heavy machinery and the Defense Industry. The combined industrial experience of this senior defining group was over 100 years. This first program was premised on the concept of helping working professionals transition from technical/non-technical individual contributors to higher-level leadership and/or management positions. Courses in the curriculum were intentionally differentiated from MBA-type courses; this, to more readily act as the intermediate training and education from an individual contributor position to a more senior-level leadership position. This is not to say those participants to this Leadership concentration could not academically or intellectually excel in senior-level corporate positions, on the contrary.

This program, although sufficient for providing leadership/management knowledge, skills and ability to perform in a senior-level corporate capacity, is instead intended to create the foundational skills of basic leadership/management. Basic foundational skills in

leadership/management, coupled with the individual's initiative and gained confidence from achieving hierarchically higher levels of responsibility, would propel the career minded into increasingly greater senior-level opportunities. It has been readily recognized in industry, when you take a technical individual and move them into a leadership/managerial position, without properly training them in leadership/management skills and techniques, you lose on two counts; you lose a good technical person and gain a less-than capable manager. The corollary to this scenario is what happens to a leader when they become under pressure and have not been properly trained in leadership/management skills and techniques. In this scenario, the untrained leader tends to resort back to micromanaging their technical subordinates. The untrained leader does this because they were first and foremost good technical people themselves, and it was this skill set that allowed them to move into these higher levels of responsibility. Unfortunately, reverting to micromanaging their technical subordinates is not what this point in their career demands of them. As leaders, they are expected to lead/manage. In the situation with a newly appointed technical individual contributor turned leader, the one-time good individual technical contributor, quickly becomes no longer the best technical person, as the technology, tools, techniques, practices or methodologies have most likely passed them by [6].

The Leadership concentration learning hybrid program curriculum was organized around three basic thoughts and subsequent sets of courses; leadership, business/technology management and application. Within the leadership category are courses on leading teams, interpersonal skills, global leadership, human capital management and organizational development and change. Business/Technology management courses are focused on quality and productivity in industry and technology, project management, technology in a global environment, ethics law and policy for leaders, and, finance for non-financial managers. The application of the above referenced educational opportunities for learning and assimilation was a set of core courses in research methods, research and writing for business and industry, and, a culminating capstone project/paper.

The overall program spans five contiguous semesters, fall, spring, summer, fall and spring. Each of the primary semesters, fall and spring, has three courses for a total of seven credit hours. The summer semester is two courses for five credit hours. The entire program is 33 credit hours. Figure 1 depicts the courses and their respective descriptions.

	Course Name	Credits	Description
Semester 1 (Credits 7)			
	Research Methods	3	In-depth examination of qualitative methods and frameworks used in technology research. Students learn by application a variety of methods from the qualitative research toolbox such as interviewing, focus groups, observation, and experience analysis. TECH 621 prepares students to plan, pilot, and assess an original qualitative research study.
	Leading Teams	3	Team success is dependent on effective leadership. This course will focus on leadership processes both internal and external and the leadership functions that help teams satisfy their critical needs and regulate their behavior through goal accomplishment.
	Research and Writing for Business and Industry	1	A study of academic research and writing practices.
Semester 2 (Credits 7)			
	Interpersonal Skills for Leaders	3	Developing and improving interpersonal and group dynamic skills for effective leadership in organizations. Emphasis on action learning and real-world application of skills.
	Quality and Productivity in Industry and Technology	3	Quality and Productivity in Industrial Technology, 3cr, Examines the contemporary issues of continuous improvement in quality and productivity in manufacturing and service industries. Includes a close examination of the evolving philosophies bearing on the scope, improvement, and costs of quality assurance programs in industry and technology.
	Proposal	1	Opportunity to study specific problems in the field of supervision and personnel under the guidance of a qualified faculty member within the department. Does not include thesis work.
Semester 3 - Summer (Credits 5)			
	Global Leadership	3	The theoretical foundations and empirical research associated with emerging strategies and theories in world-class leadership. The structure of the course will be four fold - discovery of critical leadership skills and behaviors through critical review of what leaders do, discovery of critical leadership strategies – rethinking the sources of leadership, researching situations and world-class leadership as it flourishes, and self analysis and discovery of leadership strengths and weaknesses as measured against the skills and behaviors studied.
	Human Capital Management	2	An examination of current topics and issues in global human capital management. Emphasis on creating organizational strategic advantages within the leadership to workforce interface.
Semester 4 (Credits 7)			
	Project Management	3	Project Management in Industry & Technology, 3cr, The factors influencing decisions during the initiation, implementation, and termination of industrial and manufacturing projects are examined. Students work as project teams, using project management tools to develop implementation strategies.
	Finance for Non-Financial Managers	1	Provide a basic understanding of key financial terms and calculations such as NPV, cash flow, inflation, rate of return, currency etc. for use in understanding financial information, making good economic decisions and project analysis.
	Organizational Development and Change	3	This course explores issues in leadership and organizational change. Included are change theories, utilizing resistance to change, contemporary approaches to change, the future workplace, and researching best practices in organizational change.
Semester 5 (Credits 7)			
	Technology in a Global Environment	3	Introduction to the challenges faced by the practicing technologist when working and interacting with international technical personnel, both here and abroad, including history, standards, education, and practice of technology outside the United States.
	Ethics, Law and Policy for Leaders	2	One of the most important challenges of this century is the crisis in ethical leadership and decision making. Ethics involves a social conscience - through the case method, students will explore the issues surrounding ethics in business, industry, and technology.
	Project	2	Opportunity to study specific problems in the field of supervision and personnel under the guidance of a qualified faculty member within the department. Does not include thesis work.

Figure 1. Leadership Concentration Distance Learning Hybrid Curriculum

Analysis and Conclusions –

At this writing, this program is mid-point in its first cohort offering. Although no formal assessment has taken place, the faculty and administrative body (ProSTAR) for the program have encouraged and engaged program participants to provide qualitative verbal feedback which can then be used for incremental mid-stream changes. To this end, a number of minor changes have been made including:

- Procedural processes on weekend administration
- Frequency of cohort communications for administrative information exchange
- Heightened faculty awareness of participant classroom concerns

ProSTAR has recently concluded a ten year longitudinal study of another cohort-based weekend program in Technology Innovation[7]. The findings of this ten year study provided valuable insight into continuous improvement activities, which, were incorporated into this program on its initiation. Further studies will include this program and are expected to provide yet additional insight into leadership education and subsequent program offerings.

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