



AN ANALYSIS OF PROJECT MANAGEMENT PROGRAMS IN THE STATE UNIVERSITY OF NEW YORK SYSTEM (SUNY)

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Abstract

The Project Management Institute (PMI) estimates that 6.2 million project management positions will be created in the USA from 2010 to 2020. This points to a critical need for academic training in this field. There are a number of project management academic programs in colleges and universities throughout the United States and the world. In the State University of New York system, SUNY, project management courses can be taught online, hybrid, or face to face as part of professional development, as an individual course, as part of a certificate program, or taught as an undergraduate or graduate level program. There are a small number of each type in SUNY schools. Three recommendations are made to meet the projected need for project management trained individuals.

Introduction

Ramazani and Jergeas (2015) noted a gap between what education providers are offering and what is needed to deal with projects in today's complex work environment. Universities were established to bridge this academic preparation and skills gap by offering appropriate educational opportunities. Are universities doing this appropriately today? According to the Project Management Institute study Job Growth and Talent Gap 2017 to 2027, (PMI, 2017), across the globe, there is a widening gap between employers' need for skilled project management workers and the availability of professionals to fill those roles.

There are several catalysts for this gap:

- 1) A dramatic increase in the number of jobs requiring project oriented skills.
- 2) Attrition rates, including professionals retiring from the workforce
- 3) A significant uptick in demand for project management talent, especially in rapidly developing economies such as China and India professionals. (PMI, 2017)

Purpose of the Study

The purpose of this study was to review the academic programs available in project management across SUNY Schools to see if the universities and colleges curriculum provided sufficient courses and programs to meet the future growth needs for employees with project management skills and training.



Growth in Project Management Jobs

In today's global economy, jobs have become more project oriented, as the skills used in project management expands in a variety of industries such as healthcare, information technology, and professional services. An analysis shows that the healthcare sector in the United States has a 17% growth in project oriented jobs. Manufacturing and construction are still the leading sectors for openings in project management skill areas. (PMI, 2017)

More specifically, the Anderson Economic Group (AEG) and PMI analyzed project-oriented employment opportunities and found that in the United States between 2017 and 2027, there will be an increase of 2.1 million jobs or 213,974 new jobs per year. (PMI, 2017). It was noted that project managers contribute to a nation's productivity and there is a possibility of a \$22.5 billion GDP risk reduction in the US economy if project positions were not filled. The PMI analysis of talent gap supports the issue that future demand for project managers is growing faster than demand for workers in other occupations. This leads to reviewing the opportunities, strategies, and pathways project managers can follow to be best prepared for successful employment in the field.

Project Management Education and Training: Project Management Institute

There are a number of opportunities for education and training in the area of project management. These opportunities could be through the Project Management Institute at the national, state, or local level. Many large cities in New York have chapters of PMI including Buffalo. Through specialized academic program of their own or those linked to SUNY, courses are available. The PMI states that Certified Project Management professional (PMP) may earn 20% more than those who are non-certified professionals, an added incentive.

There are educational opportunities through the Project Management Institute that provide the following training leading to the most appropriate professional certification:

Project Management Professional (PMP): The PMP is the gold standard of project management certification. The PMP validates competencies to perform in the role of a project manager leading and directing project and teams.

Certified Associate in Project Management (CAPM) is not as in depth as PMP and covers industry basics like terminology and processes of effective project management.

Program Management Professional (PgMP) is for more complex projects. It is designed for those who manage multiple, complex projects to achieve strategic and organizational results.

Portfolio Management Professional (PfMP) recognizes the advanced experience and skills of portfolio managers. The PfMP demonstrates proven ability in the coordinated management of one or more portfolios to achieve organizational objectives.

Professional in Business Analysis (PMI-PBA) highlights expertise in business analysis. It spotlights the ability to work effectively with stakeholders to define their business requirements, shape the output of projects, and drive successful business outcomes.

Agile Certified Practitioner (PMI-ACP) is for those who apply agile principles and practices on projects.

Risk Management Professional (PMI-RMP) recognizes demonstrated knowledge and expertise in the specialized area of assessing and identifying project risks along with plans to mitigate threats and to capitalize on opportunities.

Scheduling Professional (PMI-SP) recognizes demonstrated knowledge and advanced experience in a specialized area of developing and maintaining project schedules.



Project Management Education and Training: Academic Programs

There are a variety of opportunities for PMI training and possible certification available in academic settings. These include various delivery systems as well as different academic levels of professional development, of individual courses, of certifications, and of an undergraduate or graduate degree.

Delivery Systems: Academic content of project management can be taught in a face-to-face, hybrid, or online format. A face-to-face format is a typical academic structure with the students attending class while the instructor provides content material necessary to support student success. An online format allows a student to typically not attend a formal class and to complete their work through an Internet connection at their own pace and convenience. The hybrid format blends the two delivery systems so that some material is available online and some material is presented face-to-face.

Academic Levels: project management material and curriculum can be presented in a variety of ways, including as professional development, as individual courses, as a certification program, and as an undergraduate or as a graduate degree.

Professional development would be short-term programs or classes as short as 2 to 3 hours or a longer time frame of study. Individual course would typically be a three credit, 15 week course encompassing 45 hours of in-class study. A certification program could be at the undergraduate or graduate level and typically includes 12 to 15 credit hours or 4 to 5 courses. A certificate is a completed earned credential to show professional competencies in a specific content area.

An undergraduate program would include the material to gain a degree in project management, engineering, or business area. A graduate program would be for those students who have completed their undergraduate program and would include additional academic course material to gain a graduate degree.

A strong education background is important and necessary for advanced skill development and success in project management. The main goal is to increase the individual's value to an organization and their success in project management. They would gain enhanced knowledge of the conception, monitoring and tracking project costs, budgets, and scheduling, managing project human, natural, and economic resources. Strong communications skills, ethics, and leadership are also key components of a project managers' success.

For success in project management, having the necessary knowledge and skills supports achievement. Software Advice, (2018) an online resource reviews and researches project management software and technology. In an analysis of 300 current job openings for project managers, it was found that nearly 50% of the total job listings investigated required a bachelor's degree. However, in the aerospace, healthcare and IT positions, 36% would accept equivalent experience to a bachelor's degree.

Project Management Academic Programs in SUNY

New York is the fourth largest state by population size after California, Texas, and Florida. The State University of New York (SUNY) has 64 campuses and is public supported. There are 4 University Centers, 10 University Doctoral Institutes including 3 medical schools and a veterinarian school, 13 University Colleges, 7 Technical Colleges, and 30 Community Colleges. The 10 University Doctoral Institutes and 7 Technical Colleges were not included in this study.

The following is an analysis of project management in 47 SUNY campuses.



University Centers (4):

A university center is a doctoral granting, research focused institution in SUNY.

Albany: None offered

Binghamton: Continuing Education in engineering.

Buffalo: Certification in Project Management offered as 12 week classes starting September 9, 2019. Civil Engineering course CIE 493: Project Management

Stoney Brook: Through the Center for Corporate Education, Project Management certification course are offered. There are no undergraduate or graduate courses in project management offered.

Summary of Undergraduate/Graduate Project Management

Degree: None

Courses: 1

Certification: 2

Continuing Education: 1

Universities at Buffalo and Stoney Brook offer project management certification.

University Colleges (13)

A university college is a comprehensive institution in SUNY that provides bachelor and master degree programs. Beside a selected major each student receives a strong liberal arts background.

Brockport: CIS 427: Project Management (U)

BUS 368 Project Management (U)

Buffalo State: PSM 601: Project Management in MS in Data Analytics (G)

Cortland: none offered (has no business program)

Empire State: **Empire State College** offers a Graduate Certification in Project Management that has been reviewed and approved by the Project Management Institute (PMI). It includes 12 credits in four, three credit hour courses. These four courses are Management Information Systems, Tools and Processes in Project Management, Managerial Perspectives in Project Management, and Strategies and Tactics in Project Management. The delivery system is 100% online.

SMT 273483: Project Management (U)

Fredonia: BUAD 463: Information Technology Project Management (U)

Geneseo: none offered

New Paltz: BUS 458: Introduction to Project Management (U)

BUS 580 Project Management for MBA's (G)

Old Westbury: CS 7520: Project Management in MS in Data Analytics (G)

Oneonta: MGMT 365: Project Management (U)

Oswego: MBA 568: Project Management (G)

Plattsburgh: MIS 404: Information System Project Management (U)

SCM 375: Project/Process Management (U)

Potsdam: MGMT 606: Project Management (G)

Purchase: Continuing Education 6 week course Project Management Applications

Summary of Undergraduate/Graduate Project Management

Degree: None

Courses: 13: 4 graduate and 9 undergraduate courses

Certification: 1

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Continuing Education 1

Empire State offers a project management certification.

Purchase offers project management through continuing education

Community Colleges (30)

The community colleges system was established as a 2 year typically publicly financed program and is sometimes called a junior college or technical college. The main focus of a community college is to provide specialized workforce employment and employee development as well as offering a 2 year Associate's Degree in a specialized academic or trade area.

The SUNY system has 30 community colleges to meet local education needs around the state.

There are four community colleges who offer a 3 credit course in project management. They are at Broome County Community College, (near Binghamton, Central New York) BIT 265: Project Management; Erie Community College (Buffalo, Western New York) BM 217 Project Management; Genesee Community College (Batavia, Western New York) BU 221: Introduction to Project Management; and Rockland Community College (Ramapo, downstate) OFT 107: Project Management.

Several community colleges including Corning, Onondaga, Tompkins/Cortland, Ulster, and Westchester offer a 35 hour project management program with preparation for the PMP exam. Ulster and Westchester offer their programs online.

Other community colleges including Adirondacks, Jefferson, Niagara, and Sullivan offer project management programs as needed. Some community colleges offer no project management programs.

Summary of Undergraduate Project Management at Community Colleges

Degree: None

Courses: 4: 4 associate level

Certification: 0

Continuing Education 6

Analysis of SUNY Project Management Data

Summary of Undergraduate/Graduate Project Management

Degree: None

Courses: 18 available: 4 graduate, 10 bachelor, and 4 associate degree undergraduate courses

Certification: 3 offered: 1 graduate, 2 undergraduate

Continuing Education: 8 programs: 2 at university centers or colleges, and 6 at community colleges

According to the above information, SUNY does not offer any graduate, undergraduate, or associate degrees in project management. There are 18 project management courses taught. Four are at the graduate level, ten are taught at the bachelor degree level, and four are taught at the associate degree level.

There are three certification programs in project management, one graduate and two undergraduate. Eight continuing education programs are offered tied into a non-credit course situation. Two were at university centers or colleges with the remaining six programs at community colleges. Since community colleges focus more on workforce development it seems appropriate for many of these programs to be provided locally, close to students.



Conclusions

SUNY offers a small mix of online and face to face courses at various levels in project management. In a large state like New York, it seems that the number of opportunities to teach project management would be higher than those found. The options available for project management education in SUNY appears to be Insufficient to meet the demand of the potential project management labor market.

Recommendations

- 1) Increase the offering of project management programs by establishing an undergraduate degree in Project Management through Empire State College or Open SUNY. Since Empire State has more than 30 locations across the state and Open SUNY is online, both can be used to establish a stronger Project Management academic presence in SUNY.
- 2) Add more individual project management course at the university centers and at the university colleges to allow students in business, in engineering, in the health sciences, and in technology to strengthen their skills and preparation for future positions.
- 3) Support community college specialized programs in project management to enhance workforce development and employee development.

References

- Project Management Institute (2017). Project Management Job Growth and Talent Gap 2017-2027.
- Ramazani J. and G. Jergeas (Jan. 2015) Project managers and the journey from good to great: the benefits of investing in project management training and education. International Journal of Project Management V33, Issue 1 p.41-52
- Software Advice as quoted in 4-20-2018 Project Management Career Outlook everbluetraing.com.
- SUNY: 2019 information from www.suny.edu.