

## Establishing a Project Management Degree

*The world is seeing an explosive growth of projects among organizations across all sectors. But the current lack of academic programs in project management paints a disturbing picture, and a significant opportunity for schools.*

### EXECUTIVE BRIEF

By offering project management coursework—both as a stand-alone major and as part of coursework leading to other disciplines—schools can meet the global need for programs in this field of study as well as attract more students to their institutions. Just consider the statistics: According to Anderson Economic Group's (AEG) 2008 report, Project-Oriented Worker Demands and the Economic Costs of a Project Management Skills Shortage, there will be 1.2 million yearly job openings in project-oriented occupations.

On top of that, 61,000 PMI members plan to pursue an advanced degree in the next two years, according to a 2009 MediaMark survey. And 32,500 of those members plan to earn a master's degree in project management, while 22,400 hope to pursue their doctorate in project management.

Institutions looking to introduce project management degree programs should consider best practices developed at other schools and then, based on the strengths of the institution, customize a project management program to make it stand out. Schools with leading-edge programs can forge powerful ties with corporations, not-for-profits, government entities and organizations. Some emerging points of success include adopting a multidisciplinary approach and providing coursework readily applicable in the real world.

Faced with an ultra-competitive job market, it is no surprise that students are seeking out degree programs that can help them acquire the skills most in demand. One of the most sought-after skills is project management. In 2009, U.S. News and World Report ranked project management as the third-most desired skill required by business professionals, behind only leadership/negotiation and business analysis.

Yet some universities are lagging behind. More than 3,300 schools currently teach project management courses, but only approximately 660 institutions offer a project management degree or certificate program, according to preliminary results of an ongoing global census of schools. More than 4,600 business or technical schools around the globe still offer no project management coursework whatsoever.

Those schools without a project management program may be missing out on a major opportunity to make their mark in a booming profession and to grow their student populations. The University for International Cooperation in San José, Costa Rica, for example, offers a master's degree in project administration. Since starting with just 20 project management students 15 years ago, the university has graduated more than 1,000 students in the discipline. Today, one-third of the 1,500 students enrolled at the school are working toward a master's degree in

project administration. The program has grown 15 to 20 percent per year, while general enrollment at the school has increased 8 percent per year. That growth is only the beginning, says Nolan Quiros, PhD, vice president of academics at the university.

"The master's program proved its worth in the marketplace. We want to continue to grow in a manner that would allow us to provide the best tools to our students and alumni," he says. "Today, education is about learning tools, solving problems and teaching and learning in teams. The students believe in the master's program because they have found the right tools to succeed in the real world. That is what a master's program should be about."

In addition to providing a way to increase enrollment, project management degree programs offer a powerful means for universities and colleges to:

- Expand learning avenues
- Meet the evolving market need
- Develop as thought leaders
- Expand career avenues for graduates with technical and business degreesForge partnerships with corporations

"Universities teaching project management recognize the widespread benefits and continue to introduce elements [of project management] across their academic programs," says John F. Kelly, director of the Centre for Project Management, Kemmy Business School, University of Limerick, Limerick, Ireland. "In so doing, educational leaders build internal knowledge and expertise that in turn can work to advance the discipline through various teaching and research activities. By developing project management programs, they are feeding directly into the needs of industry."

Employment in project-oriented occupations across all industries is slated to grow at a rate of 1.5 percent from 2006 to 2016, versus 1 percent growth for total employment over the same period, according to the AEG Project-Oriented Worker Demands and the Economic Costs of a Project Management Skills Shortage report. One-half percent represents 1.2 million new jobs in project management each year. Those careers will offer higher than average salaries—US\$89,000 versus US\$49,000 per annum in the United States alone. In addition, project management degrees and credentials are portable across functions, industries and geography—a key consideration in an ever-flatter global market.

University of Limerick students view completion of the project management program as a practical opportunity to advance their careers. "Students are mostly [employed while working on their degree], so they benefit from bringing their knowledge into practice within their own organizational setting, which in turn benefits the organization," says Mr. Kelly. "Students like the challenge. We include many hands-on elements where they are expected to apply what they learn—and this they really like."

### PROFILE: THE UNIVERSITY OF TEXAS AT DALLAS, DALLAS, TEXAS, USA

*Intently focused on preparing experienced professionals for continued success, this university has developed an executive program with a global twist.*

In 1997, Jim Joiner, PMP, the then newly appointed director for the graduate level project management degree program at the University of Texas (UT) at Dallas, knew he was entering uncharted territory. After all, at the time there were only 12 to 15 other schools in the world offering project management graduate programs.

From its inception, the program embraced an executive platform catering to experienced professionals. On average, students are about 35 years old, and most possess 10 years of career experience.

To reach these students, Mr. Joiner elected to use an integrated curriculum approach for the project management core. "Instead of taking the functional approach—such as courses in scope development, scheduling, etc.—we took a processing point of view," says Mr. Joiner, who is now retired. "We took

[A Guide to the Project Management Body of Knowledge's] (PMBOK® Guide) five processes of initiating, planning, executing, controlling and closing as our core course identifiers, and built bundles of knowledge needed to achieve success."

As a result, courses cover the technical, interpersonal and supervisory components needed as project managers embark upon each process. "The goal has always been to put a curriculum together the way people work," says Mr. Joiner. "Students find it extremely rewarding after a few months."

UT Dallas offers its program online as well as on campus, which allows students the flexibility to pursue their degree regardless of situational circumstances. Although most students select one or the other, its flexibility allows professionals to continue with their education during temporary or permanent transfers. The

online material is also available to on-campus students so that if they miss a class they can go online and listen to the lecture.

And whether or not students participate virtually or face-to-face, all take part in the study abroad tour. "This is instrumental in helping students understand global practices," Mr. Joiner says. He adds that this study abroad aspect of the curriculum is a key differentiator of the program.

*“The key elements of a [project management] program must concentrate on the topic and its relation with the real needs of the practitioners.”*

—Nolan Quiros, PhD, Vice President of Academics, University for International Cooperation, San José, Costa Rica

### PROFILE: CAPELLA UNIVERSITY, MINNEAPOLIS, MINNESOTA, USA

*Meeting industry standards and helping students prepare for the needs of the market have helped this school’s project management degree programs stand out from the rest.*

Since first offering a bachelor of science in project management program in 2001, Capella University has expanded the breadth of its project management specializations to include three IT-track and three business-track specializations at the bachelor’s, master’s and doctorate degree levels.

“The goal has been to give those learners who are interested in becoming project managers the ability to learn what it takes to succeed in their field within the context of the broader understanding of a degree program in IT or in business,” says Sue Talley, PhD, associate dean, school of undergraduate studies. “Project management has become an increasingly sought-after skill, so even in recessionary times it is a degree program that attracts students.”

Although Capella does not release enrollment numbers within specific disciplines, Dr. Talley reports that students have responded well to the school’s project management degrees and certificates.

“Our success in building a project management program has also brought us national and international recognition, and likely added enrollments that we would otherwise not have,” Dr. Talley says.

Key to the school’s continued program success has been its ability to align with industry standards while still distinguishing its project management offerings from others in the marketplace.

Program differentiators include:

- Accredited by the PMI Global Accreditation Center for Project Management Education Programs (GAC)
- Ranks as one of few institutions worldwide to offer a doctorate in project management and one of even fewer to offer two doctorates
- Offers competency-based assessments that review a prospective student’s work experience and certifications, such as the Project Management Professional (PMP)<sup>®</sup> credential, and other degree programs for possible academic credit
- Designated as a PMI Registered Education Provider (R.E.P.), allowing students to earn their bachelor’s or master’s degree and professional development units (PDUs) from PMI at the same time
- Offers a graduate-level certificate in project management
- Developed online portfolios that allow graduates to demonstrate their competencies
- Features a curriculum specifically designed for the online format
- Allows project management students to start earning master’s degree-level credits during their bachelor’s program, reducing the time to complete a master’s degree by up to on half and cutting the cost of taking both degree programs separately by more than US\$6,500

## THE POWER OF PROJECT MANAGEMENT

It is all in the timing. Just as the first generation of project managers approaches retirement, the world is seeing an explosive growth of projects among organizations across all sectors.

Given that scenario, the current lack of academic programs in project management paints a disturbing picture—and a significant opportunity.

“Considering that project management as a discipline continues to experience exponential growth, we are still far from saturation,” says Jim Joiner, PMP, former director and current part-time professor, University of Texas at Dallas, School of Management, Executive Education Project Management program. “Academics need to figure out how to put together adequate, legitimate doctoral programs in project management. As the market continues to grow, there will be an increasing need, which demands our attention.”

Project management has roots in construction, defense, engineering and manufacturing, but has spread into other domains since the 1960s. Today, project management is integrated into a variety of areas of study from business and management to IT and engineering. It is focused on execution with defined constraints of scope, schedule, budget and quality with a proven toolkit of methodologies. It fosters integration with project teams capable of working across functional “silos” that inherently divide so many organizations.

Having project management at the core of an organization’s processes helps speed learning. Projects are how organizations learn: systematic documentation and “lessons learned” reviews increase knowledge transfer. Organizations clearly see the potential. According to a 2008 Forbes Market Research survey of 543 Asian and U.S. executives, the strongest methods for determining the ROI of project management are the discipline’s ability to generate and execute new ideas and faster implementation of processes without error. Other factors cited include customer satisfaction, repeat business and growth of the business.

According to Anderson Economic Group’s (AEG) 2008 study, Project-Oriented Worker Demands and the Economic Costs of a Project Management Skills Shortage, the size of projectized industries as a whole is growing in terms of combined production and income. In 2002, for example, the 15 known projectized industry sectors had US\$2.3 trillion of real inflation-adjusted GDP. By 2006, however, the same sectors combined to reach US\$2.9 trillion in GDP—a 5.6 percent compound average growth rate.

This is almost double the 3 percent average growth rate in real GDP across all industries. Productivity levels per employee in projectized industries are also growing with real GDP, reaching US\$177,567 per employee in 2007, up from US\$144,506 in 2002 (a 5.3 percent average growth rate).

The growth of project-oriented occupations is real and sustainable at a global level, regardless of the current economic conditions, according to the AEG study. For instance:

- By 2016, the global projectized industry GDP is expected to increase by US\$4.5 trillion.
- Of that US\$4.5 trillion increase, US\$123 billion to US\$194 billion is at risk from project management skills shortages.
- Of the anticipated 32.6 million project-based employees in 2016, 31 percent will have been hired since 2006.
- Professional, scientific and technical industries will have the most demand.

## BUILDING A SUCCESSFUL PROJECT MANAGEMENT PROGRAM

Spotting a potential opportunity and crafting a solid project management degree program are two different things, however. Not all programs are created alike, but there are common elements among best-in-class project management programs:

**Aim to deliver real-world ROI.** The best project management programs focus on behavioral competencies such as leadership and team-development skills. “They should also include strong business-oriented components, as [students] need to appreciate in full how project management delivers benefits to their organizations,” says Mr. Kelly.

**Academic leaders must also accept that project management is a science that grows with practice and research,** says Dr. Quiros. “The key elements of a program must concentrate on the topic and its relation with the real needs of the practitioners,” he says.

**Account for uniqueness.** Project management is not a functional discipline—meaning project managers need to be very diverse in their knowledge and skills. “They are managing a temporary situation, because projects, by definition, end. Typically they are managing a group of people who are not permanently assigned to them in a staff function,” says Jim Joiner, PMP,

former program director and current part-time professor at the University of Texas (UT) Dallas, Dallas, Texas, USA.

When putting together a curriculum, institutions must comprehend the skills needed to handle the ambiguity prevalent in the project management arena, he explains. “Some programs fail here because they teach a lot of the project management tasks without paying enough attention to the broader knowledge requirements,” he says.

**Strive for multidisciplinary excellence.** Having a wealth of well-differentiated educational programs provides the profession with a greater number of knowledgeable project managers who have experience in diverse industries and are capable of meeting the challenges ahead. Simply put, project management should be part of the core academic curriculum, both as a stand-alone subject and interwoven into other areas of study. Schools should offer classes from the introductory up to the doctorate level.

At Capella University in Minneapolis, Minnesota, USA, the decision to offer project management specializations with a foundation of core classes in either IT and business has held across-the-board appeal.

“This has been very successful for Capella, as well as for our graduates and our corporate partners. Because of the growing talent shortage in the field,

the strength of a university’s project management program is also a key asset in developing educational alliances with key corporations,” says Sue Talley, PhD, associate dean, school of undergraduate studies. “Capella’s program is particularly attractive to students and businesses, because we offer one of the broadest spectrums of project management degrees available, ranging from bachelor’s to doctoral degrees, and providing a choice of an IT or business focus at each degree level.”

A strong project management program has also increased the value, recognition, and enrollment in all of Capella University’s IT and business programs, according to Dr. Talley. “Project management covers one of the most significant core competencies that all IT professionals and business managers should have,” she says. “It has also made us realize that project management is an important skill for all technology professionals.”

Educational leaders should view the program’s development and deployment at the institutional level, especially in the earliest stages.

“Leaders need to understand where project management rests within the institution, and how it might best serve across various programs,” Mr. Kelly says. “While it might make sense to locate it within the business [school], it should be

### FOR MORE INFORMATION

PMI has created a website to assist and facilitate schools interested in starting courses or programs in project management. Located at [PMITeach.org](http://PMITeach.org), it contains a wide variety of practical information, including:

- Links to resources available either directly from PMI or through its network of academic, association, corporate and government partners
- Research grants available from PMI’s research department
- Various scholarships and other types of financial aid available through the PMI Educational Foundation

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—Sue Talley, PhD, Associate Dean, School of Undergraduate Studies, Capella University, Minneapolis, Minnesota, USA

viewed as cross disciplinary and serve the wider university community needs.”

Schools must fight the temptation to isolate themselves or they may end up needlessly limiting project management’s reach.

“Program directors, deans and chairs fight to define to which discipline project management training belongs,” says Dr. Quiros. “However, at the core, project management is an area of knowledge that is noticeably transferrable to other areas of knowledge. It is a process of thought that can be applied in an interdisciplinary way. Every professional can receive project management training and successfully apply the knowledge to enhance how he or she performs his or her field. In other words, project management training is truly a way to solve problems and learn how to approach work with a different perspective and the challenges we face in our professions.”

There is no need to do it alone. The process of starting a project management degree program can be overwhelming, but schools can find help from an array of sources.

In a tough economy, for example, organizations are seeking partnerships, and educational institutions should capitalize on that need as a way to expand their reach.

“Organizations desire training that is supported in a collaborative nature by practitioners, researchers and academics,” Dr. Quiros says. “Achieving

this mix makes training both sustainable and realistic. The role of colleges, universities and higher-education institutions is to support and provide the required training that can be verified and certified.”

There are plenty of willing partners in industry, especially project-centric corporations. Ideally, corporations work hand-in-hand with educators to structure course content and programs so they relate to real-world needs. Successful partnerships provide academic researchers with access to corporations and, in turn, provide corporations with access to the finished research. Seasoned executives also often serve as adjunct lecturers, willing and able to apply their experience to the learning environment.

Capella, for example, uses its project management offerings to strengthen alliances with more than 175 corporate partners, including HP, GMAC/RFC, CIGNA, Caterpillar, Best Buy, AT&T, Symantec, Home Depot, Walt Disney Co., Tyco Electronics, Piper Jaffray and Microsoft.

“Our strong project management program and our relationship with PMI have been attractive to businesses,” says Dr. Talley. “An analysis of students who have entered Capella affiliated with one of our corporate alliances has shown that a significant percentage were enrolled in project management specializations.”

An institution’s ability to reach out to industry can also play a significant role in determining a program’s success, explains Dr. Quiros. “If an academic program only teaches what will be applied in the real world, then the glass is halfway full. The other element is the faculty. Universities need to move out of the campus and learn from the real world,” he says. “Our faculty is composed 90 percent of professionals that practice and work every day in the things they teach. This helps us guarantee students

### WHAT IS THE PMI GLOBAL ACCREDITATION CENTER FOR PROJECT MANAGEMENT EDUCATION PROGRAMS (GAC)?

GAC serves two fundamental purposes:

- To ensure the quality of academic degree programs in project management globally
- To assist faculties and universities in the improvement of project management degree programs

Academic accreditation is conducted at the bachelor’s, master’s and doctorate program levels.

Graduates of GAC-accredited programs receive 1,500 hours of project management experience toward earning their Project Management Professional (PMP)<sup>®</sup> and/or Program Management Professional (PgMP)<sup>®</sup> credentials.

**For more information, visit [PMI.org](https://www.pmi.org).**

*“The goal has always been to put a curriculum together the way people work.”*

*—Jim Joiner, PMP, former program director and current part-time professor at the University of Texas at Dallas, Dallas, Texas, USA*

that the tools they are learning are not just exercises in a textbook.”

Map your program to established standards. Although the number of institutions offering project management programs must increase to meet market needs, the discipline shows true signs of maturity with the emergence of established principles, standards and techniques. Progressive institutions benefit from embracing industry standards rather than trying to create new ones.

At Capella, educational leaders aim to develop business and IT degree programs that deliver specific, pre-established outcomes so that students know what to expect from a particular program. “As an institution this also allows us to assess how well we are doing in delivering these outcomes,” Dr. Talley says.

The school has also recognized the growing demand for people with certifications, such as the Project Management Professional (PMP)<sup>®</sup> credential, as well as degrees when hiring, so its materials are designed to align with industry standards.

“As with all IT programs, it is also critical to review project management programs regularly to ensure that they are up-to-date with industry standards,” says Dr. Talley. “We regularly map our project

management specializations to *A Guide to the Project Management Body of Knowledge (PMBOK<sup>®</sup> Guide)* and other international standards to ensure that programs are providing the information and skills needed in today’s businesses.”

Learn from others. Schools contemplating the launch of a project management program need to realize that there are resources already available that can make the process easier.

Applying lessons learned from other institutions can make the process easier. Schools should monitor what other institutions around the world are doing and take strides to form a network from the beginning, explains Dr. Quiros. “It took too many years to realize that we can complement rather than compete,” he says. “We need to accept that globalization lets us turn academia into a collaborative tool to fulfill the needs of society without being limited by the political borders of countries.”

Schools may also benefit by seeking out guidance, resources and support from professional associations. PMI, for example, can serve as a liaison between academia and industry or government.

The University for International Cooperation’s project management master’s degree program, for example, was accredited by the PMI Global Accreditation Center for Project Management Education Programs (GAC). (See *What Is the PMI Global Accreditation Center for Project Management Education Programs (GAC)?* on page 6.)

“It was an intense process of evaluation that helped create a quality system for the rest of our programs,” Dr. Quiros says. “It’s a system that is different from the ones used normally in the academic

setup, one that is closest to quality process control.”

The GAC evaluation process centers on meetings between experts from the project management field, faculty, alumni and students, explains Dr. Quiros. “Thinking of professors accepting evaluations from a third party, or even more, a university accepting this process, was almost a dream before the GAC [accreditation],” Dr. Quiros says. “Today, the model is applied to all of our academic programs, searching for international evaluators or referees that can show the quality of our programs or help us to turn our weaknesses into opportunities.”

The opportunity is ripe for progressive learning centers willing to embrace project management. Teaching project management offers schools the opportunity to expand their programs, add faculty and enrich the intellectual fabric of their offerings to students. The proven demand is there: Organizations around the world are fast realizing that educated project professionals offer them the ability to execute their individual strategies successfully. It’s up to schools to provide the programs that can help build that next generation of project professionals.

For the University of Texas at Dallas, concrete relationships formed in 2002 with two foreign educational institutions—the University of Applied Science in Landshut, Germany, and ESC Lille (now SKEMA Business School) in Paris, France—continue to allow the now developed program to grow.

“Our students benefit from each opportunity to study abroad and make valuable company visits,” says Mr. Joiner. “Plus, there is also significant information exchange with our partner universities. For instance, we helped our German partner prepare for accreditation of its master of business administration program. In turn, we have identified and embraced successful practices from them, including the addition of systems management to our program.” ■

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