
The Power of Project Management

Project management certificate and degree programs can help academic institutions fill market demand, attract a new group of students and maintain a healthy bottom line.

The Power of Project Management Education

Executive Brief

Project management has emerged as a powerful tool for addressing the complex needs and requirements of today's business world. Organizations around the globe are turning to the profession to ratchet up efficiency and trim costs. Increasing demand, in turn, translates into a growing need for universities and other academic institutions to develop programs that educate and train project professionals at all levels and for all industries.

Although nearly 500 institutions offer undergraduate and graduate degree programs focused on project management and another 3,300 offer project management curricula, more than 4,600 schools do not offer coursework on the subject at all. As more organizations seek out highly skilled project professionals, educational institutions with a reputation for quality project management curricula will have a distinct competitive edge. Not only can a focus on project management help schools attract students across a wide array of areas of study, it can also enhance the school's reputation, and help build ties to the corporate, government and not-for-profit worlds.

Over the last decade, globalization has placed ever-more complex demands on organizations. At the same time, massive technological change has created an interconnected, 24/7 world that presents companies with an array of challenges and opportunities that couldn't even be imagined in the past. At the center of this new world order is project management.

Simply put: Project management provides a structured yet flexible framework for tackling a wide array of initiatives faster, better and in a more cost-efficient manner.

Established approximately 40 years ago, project management is a relatively new discipline, with strong roots in construction, defense, engineering and manufacturing. With the advent of the internet, it was quickly adopted by business and management.

Today, it touches nearly every corner of the modern enterprise in virtually every industry. A study by Anderson Economic Group found that project management is now used in more than 85 occupations across a wide swath of functions and

industries. As of 2006, these project-oriented occupations employed more than 7.8 million people in the United States alone—5.63 percent of all wage and salary employment.

“Project management has become an essential ingredient for success for most organizations, whether they realize it or not,” says D.W. Haskins, director of the master of science in project management program at the University of Wisconsin, Platteville, Wisconsin, USA.

Project management provides companies with a common language and methodology that facilitate the management of projects of all sizes, especially those with personnel in multiple locations.

What differentiates project management from other methods and processes is its ability to define constraints for scope, schedule, budget and quality. It also provides systematic documentation and “lessons learned” reviews that can increase knowledge transfer and speed up organizational development.

Organizations that tap into the power of project management are often able to gain a distinct advantage in a crowded and competitive global business environment.

It is no accident, then, that demand for project professionals is increasing markedly. In 2009, *U.S. News and World Report* ranked project management as the third-most valued skill by employers, behind only leadership/negotiation skills and business analysis.

Even in the recent economic slowdown, organizations are willing to pay a premium for well-honed project management skills. More than 50 percent of the 34,800-plus project management practitioners from around the globe that

For More Information: PMITeach.org

Created by PMI, PMITeach.org provides resources for schools looking to create a project management course or program. Among other things, the site serves as a clearinghouse for information about project management learning and knowledge transfer. Users can:

- **Explore global accreditation for a program.** The PMI Global Accreditation Center for Project Management Education Programs (GAC), established by the PMI Board of Directors in 2001, is a specialized accrediting body designed to ensure the quality of project management degree programs at the graduate and undergraduate levels. It also helps educational institutions differentiate themselves by establishing rigorous standards for faculty, learning outcomes and institutional resources.
- **Learn more about academic events and conferences.** Dozens of PMI conferences and project management events take place each year around the world. These events offer educators an opportunity to meet program and content experts, as well as network with others in the field. Among the PMI offerings are research and education conferences and grants, GAC academic forums focused on specific topics, and research working sessions that allow participants to gain insights into leading-edge research in the project and allied management communities.
- **Partner with registered education providers.** More than 1,400 Registered Educational Providers (R.E.P.s) exist worldwide. These independent organizations—including government agencies and institutions of higher learning—meet rigorous PMI standards for project management education and often assist in the creation or enhancement of a project management teaching program by acting as adjunct faculty or providing course materials.
- **Access the resources of PMI's global volunteer community.** More than 500,000 PMI members and credential holders represent a wealth of knowledge and expertise. Some PMI members are part of “components”—geographic or virtual groups that focus on a specific interest, skill or region. Currently, more than 250 PMI chapters exist in more than 170 countries. These experts meet in person and online to network, engage in mentorship and facilitate career development.
- **Find an academic mentor.** Some GAC-accredited institutions provide mentoring services. Institutions looking to establish a program can benefit greatly by tapping into this volunteer network and the expertise it offers, while other academic institutions with programs already in place can boost their effectiveness and find out about new concepts and technologies in the field. Programs that have yet to be accredited can learn how to earn GAC accreditation.

participated in the sixth edition of the *PMI® Project Management Salary Survey* reported their compensation had increased over the previous 12 months. According to the report, which was released in April 2010, the median annualized salary across all countries, roles and experience levels was US\$90,260, and approximately 75 percent of respondents earned at least US\$67,200.

The Growing Project Management Skills Gap

As more organizations adopt project management, a talent gap has developed. In advanced markets, long-time project managers who started on the ground floor of the discipline are at or near retirement. And in many emerging economies, there are simply not enough trained or experienced project managers to go around.

The potential for crisis becomes even more apparent considering the fact that educational institutions are not graduating enough project professionals to both replace those who retire and to fill the increased demand for

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 faculty and universities in the improvement of project management degree programs

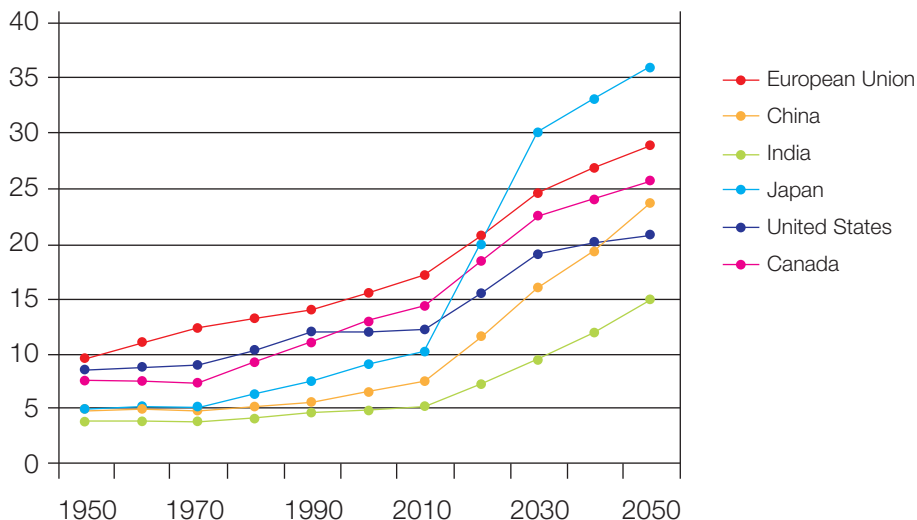
Academic accreditation may be conducted at the bachelors, masters and doctorate program level.

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

For more information, visit PMI.org.

Retirement-Age Populations in Major Countries (%)

United Nations Population Division, *World Populations Prospects: 2004*



the discipline, says Edwin Andrews, PhD, director, academic and educational programs and services at Project Management Institute. Although tens of thousands of engineering and business programs exist worldwide, four-year universities, community colleges and trade institutes are generally lacking in project management programs.

These schools are missing out on grooming the next generation of business leaders. Unlike narrowly focused fields such as finance or IT, project management encompasses an array of skill sets spanning marketing, finance, operations, technology and other areas.

That very diversity is what today's knowledge-based economy demands. To survive—and thrive—companies need employees with skills in negotiating, networking and working in a culturally diverse environment; problem-solving; critical and strategic thinking; an ability to collaborate and to lead; technological proficiency; multilingual skills; and a strong foundation in science, engineering and math. A high level of professionalism is also required, and oral and written skills are becoming increasingly important. It is a combination corporate executives and other leaders say is too often lacking in today's labor force. Yet it's a combination that project professionals can deliver—if they have the right education and training.

Academic Institutions Can Help Close the Gap

The number of schools that lack any project management education is exacerbating the skills gap. Preliminary results from an ongoing PMI global school census of business, engineering, architecture and technical institutes reveal that of the schools surveyed so far

Profile: Stevens Institute of Technology

Every student at this school is exposed to the benefits of project management.

Business demands have changed the way many schools view project management education. The Stevens Institute of Technology is a prime example of how schools can adapt to those massive shifts. The Hoboken, New Jersey, USA-based institution has set out to build coursework designed to provide the specific project management skills organizations are looking for—whether it is their main area of focus or not.

“Project management is the ‘management’ of the new millennium,” says Michael Poli, associate program director for the school's project management program.

To make sure its students are prepared for the new millennium, the Stevens Institute wants every person that walks through its doors to have some experience in the field. Regardless of the technology field they are enrolled in, all undergraduate students are required to take a project management course.

The introduction to project management course teaches students about basic tools and concepts, with a heavy emphasis on understanding and analyzing core processes such as initiating, planning, executing, controlling and closing projects.

The school also offers a master's degree in project management and an online certificate. The degree program is accredited by the PMI Global Accreditation Center for Project Management Education Programs (GAC). “From a marketing sense, GAC accreditation has significantly enhanced the Stevens brand image,” he says.

Mixing in a distance-learning capability to the school's offerings adds a high level of flexibility for its students. In effect, Stevens brings the learning to corporate employees, who often “leave their desk around 5:30 p.m., walk down the hall to a conference room or classroom at their own locations, and attend a course that's taught by a Stevens instructor,” Mr. Poli explains.

Also on the Stevens Institute syllabus:

- Strategic Perspective on Project Management, which focuses on conceptual thinking and the skills required to initiate and manage a project
- The Human Side of Project Leadership, which covers the skills required to motivate workers, organize and lead teams, and communicate and collaborate effectively
- Advanced Project Management, which examines the global implications of projects, project management theory and leadership issues

(37 percent of the survey is complete), more than 3,300 teach upward of 5,700 courses centered on project management principles and content. But more than 4,600 schools offer no opportunities whatsoever. According to *PMI's Pulse of the Profession Survey*, as of 2008, 29 percent of PMI members acknowledged holding advanced degrees in project management, which was a significant increase from 11 percent in 2006.

At this time, the majority of project management degree programs are post-graduate. Only a few schools offer undergraduate programs in project management, though many now include project management courses or modules. In addition, a growing number of institutions require business, engineering and IT students to complete specific coursework focused on project management principles.

The educational institutions that do offer project management programs report that demand typically exceeds the number of available slots for students.

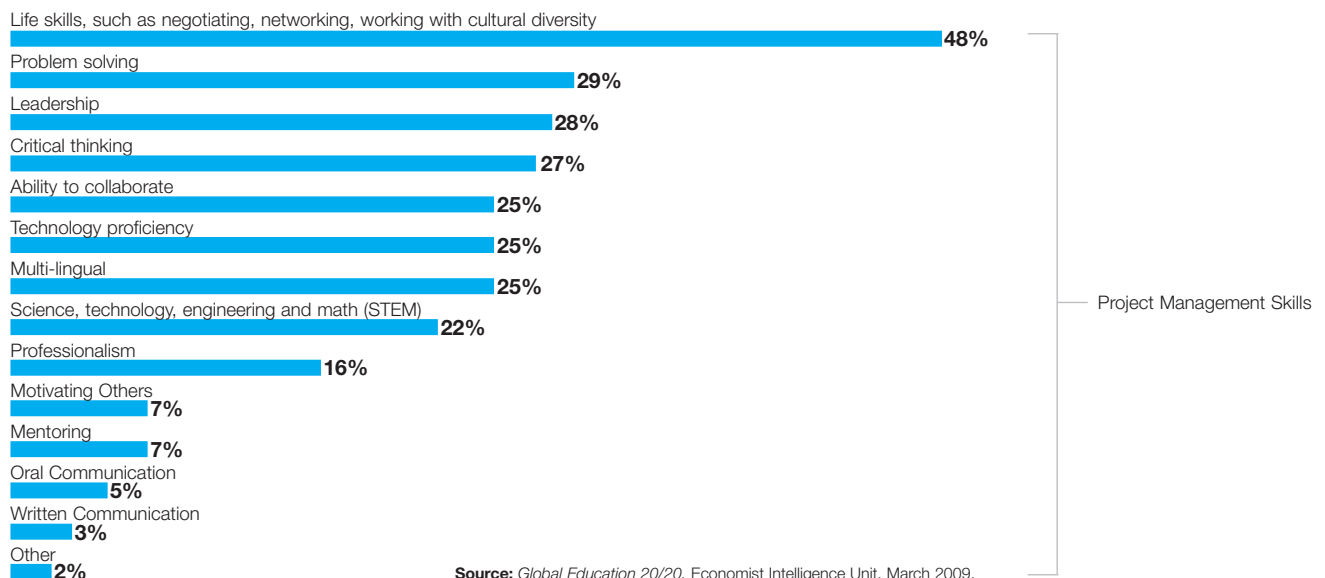
Nowhere is this more obvious than in China, where there are 104 institutions offering project management programs. Of the 40 engineering masters degree programs in China, the project management degrees are in the highest demand, with upwards of 20,000 applications each year, says Dr. Andrews. In some instances, there are 10 or more prospective students who apply for each opening.

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—D.W. Haskins, director of the masters of science in project management program, University of Wisconsin, Platteville, Wisconsin, USA

In your opinion, which skills will be in most demand from employers over the next decade? Select up to three.

(% respondents)



Source: *Global Education 20/20*, Economist Intelligence Unit. March 2009.

The overwhelming demand illustrates that the functional skill base accompanying a project management education has implications far beyond project management itself. “It makes a person more valuable and productive in whatever work they do,” Dr. Andrews says.

Just as early adopters of master of business administration programs—such as Harvard’s Graduate School of Business Administration and the University of Chicago Booth School of Business—were able to differentiate themselves, so too can those schools with a project management track distinguish their programs. Moreover, these programs help attract better faculty and frequently lead to research and program grants that benefit the school in a myriad of other ways. In many cases, project management programs also forge connections with private industries that lead to sponsorships, partnerships and other synergistic opportunities.

The Path to a Winning Project Management Program

With that kind of potential, it can be tempting for schools to jump in after the opportunity. However, assembling the instructors, curriculum and standards that comprise a successful project management program requires a firm commitment and quality resources.

61,000

The number of PMI members who plan to pursue an advanced degree in the next two years

32,500

The portion who plan to earn a master’s degree in project management

22,400

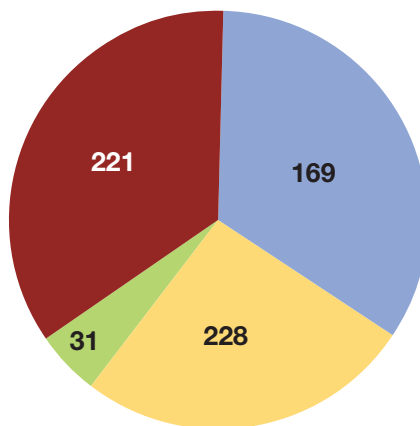
The portion who hope to pursue their doctorate in project management

Source: 2009 MediaMark study of PMI members

Distribution of Project Management Degree Programs—Regions

Of the 640+ degrees identified:

- 35% North America
- 34% EMEA
- 26% Asia Pacific
- 5% Latin America



Record Count

The educational institutions leading the pack have made it a point to ensure project management learning is readily available and visible to their students. In addition, top schools are evolving from a focus on project management learning as part of broader coursework to an emphasis on offering individual classes or an entire track with a degree or certification available. Many schools are also seeking accreditation of their programs from 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 4.)

Dr. Andrews points out that although institutions may establish best practices and accrediting bodies such as GAC provide standards that ensure quality, there's no single method or template to follow for building a project management program. Each school's syllabus is different, even if it follows general parameters for a project management curriculum. One resource, the *GAC Handbook of Accreditation of Degrees in Program and Project Management* does list the program and core learning outcomes that students should know and be able to do by the end of the program. However, these outcomes are not prescriptive regarding standards. "The goal is to build coursework that is equally relevant across multiple disciplines such as engineering, architecture, business and information technology," Dr. Andrews says.

The Future of Project Management Education

Progressive schools recognize the profound changes taking place in the business and project management arenas—and the opportunities they present. Educators are not only introducing programs to address the needs of today's students and professionals, they're looking for more innovative ways to integrate project management into the fabric of organizations. For instance, some academic institutions

Profile: University of Wisconsin, Platteville, Wisconsin, USA

This university's approach to project management education crosses industries and knowledge areas.

The University of Wisconsin, Platteville, Wisconsin, USA, recognizes that in today's environment, conventional thinking and instruction do not make the grade. So the school's leaders broke down the traditional silos to create a more integrated approach.

"The curriculum and content are positioned so that project management knowledge and skill sets are transferable across industry and functional boundaries rather than solely focused on particular areas like IT, construction, or research and development," says D.W. Haskins, director of the master of science in project management program at the University of Wisconsin, Platteville, Wisconsin, USA.

The net result is knowledge and skill sets more relevant to the workplace and more aligned to the needs of today's manager.

"We view project management as an essential business competency," Mr. Haskins explains. "The institution offers a master of science degree in project management that's delivered entirely online. The program is designed to accommodate the schedule of busy professionals, including current practitioners looking to boost their expertise in project management."

The program, which is accredited by the PMI Global Accreditation Center for Project Management Education Programs (GAC), is designed to develop cross-functional business knowledge and practical hands-on experience.

Because learning takes place exclusively online, the school is able to tap a geographically dispersed group of faculty and attract a highly diverse and global student population. "The exchange of experiences and perspectives provides a rich learning opportunity," Mr. Haskins says.

“A focus on project management is a winning proposition for everyone involved.”

—Edwin Andrews, PhD, director, academic and educational programs and services, PMI

have developed partnerships and bonds with the private sector. In some cases, corporate executives mentor students and provide support for programs to advance the field and seed future talent.

At the Said School of Business at Oxford University in Oxford, England, British Telecom has funded a research and education program in a specific area called major programs management, which focuses on the most complex aspects of project management. The company, which funded the program in 2009, has also funded research positions at the school. It's a net positive for the school, which receives funding and support, and also for British Telecom, which gains an inside track on hiring, promising graduates and valuable insight to the management highly complex projects.

Dr. Andrews says schools have an opportunity to further distinguish themselves by focusing on a particular element of project management, such as IT security, strategic management, aerospace, construction or engineering, and establishing themselves as a center of expertise in that particular area. "Over time, we will see programs that become more specialized in their focus and application of project management," he says. "Businesses, research organizations and government agencies that send managers to programs are looking for better solutions to the complex programs they face."

Awareness of project management is clearly growing in both academic and business circles. "We see tremendous future growth in the number of available graduate programs in project management. We also see increased awareness of project management techniques in the undergrad classroom, and even at the high school level," Mr. Haskins says.

Project management increasingly defines global business and determines whether organizations succeed or stumble. Within this complex and fast-changing environment, educational institutions have a unique opportunity to provide a foundation for project management and distinguish themselves as centers of knowledge and expertise. Not surprisingly, such schools are likely to gain a competitive advantage and fulfill their mission far more effectively.

Profile: Saint Mary's University, Minneapolis, Minnesota, USA

Communication skills are an important part of Saint Mary's project management lesson plan.

At Saint Mary's University of Minnesota in Winona and Minneapolis, Minnesota, USA, the focus is on giving students a dose of the real world.

Coursework for the school's master of science in project management program concentrates on the actual process of overseeing a project and stepping through its entire life cycle—from definition to implementation to evaluation. The school also leverages professional expertise and experience by offering courses taught by adjunct faculty members, who include CEOs and senior-level project managers.

Saint Mary's also places a heavy emphasis on communication techniques relevant for both individuals and teams working in a global environment. Accredited by the PMI Global Accreditation Center for Project Management Education Programs (GAC), the program has emerged as a leader by slicing through content and coursework and presenting it in an interdisciplinary manner appropriate for today's borderless marketplace.

"The application of knowledge, skills, tools and techniques to project activities is becoming a universal language," says Gerald H. Ellis, PhD the program director for the school's master of science in project management program. "We live, work and communicate in global settings."

“Universities, by design, don’t create demand, they respond to demand,” says Gerald H. Ellis, PhD, program director for the master of science in project management program at Saint Mary’s University of Minnesota, Winona and Minneapolis, Minnesota, USA.

For the business world, government and educational institutions, project management offers a path to greater efficiency, improved competitiveness, and an ability to maximize performance and profits.

Academic institutions that position themselves at the center of this trend will reap significant rewards, including an ability to attract top teaching talent, engage in leading-edge research, and better address the needs of today’s business world—and the students and professionals that work within it. “A focus on project management is a winning proposition for everyone involved,” says Dr. Andrews. ■

Profile: University of Technology Sydney, Sydney, Australia

At this institution, project management education is based on each student's skill level.

The University of Technology Sydney (UTS) in Sydney, Australia is among a handful of institutions to grant an undergraduate degree in project management.

The school, which began project management instruction in 1993, offers a bachelor of construction project management. The degree aims to imbue graduates with the broader skills and knowledge base required to meet the constantly changing demands of construction, infrastructure and related industries.

The coursework revolves around all aspects of construction, including business management, technology, project management, quantity surveying, applied economics, contract administration and property development. Students who graduate with the degree are able to advance to the forefront of industry and are prepared to apply theory in practical and relevant ways, says Shankar Sankaran, PhD, PMP, an associate professor of project management at UTS.

What sets the UTS program apart is that students can select subjects according to their level of experience. “It’s a way for students to address specific gaps in their knowledge and focus their attention on the material that provides the biggest benefit,” says Dr. Sankaran. “These are skills that are necessary for today’s project managers.”

Students can also study sub-specialties like finance and economics to further develop skills and knowledge. The goal of the undergraduate program is to turn out graduates ready to step directly into positions, including construction manager, contract manager, cost engineer, estimator, facility manager, project manager, property developer, quantity surveyor, scheduler or site manager.

In addition, UTS offers three postgraduate programs focused on project management: a master of project management, a graduate diploma in project management and a graduate certificate in project management. These tracks are designed to help students apply relevant theory to practice, understand project management methodologies within an organizational context, communicate more effectively, gain a greater appreciation for ethics and creative problem-solving, learn how to provide value to customers and manage conflicts, and how to apply overarching concepts such as project portfolio management.

APPENDIX

Among the sites that can provide relevant information for educational institutions:

- **Academy of Management.** Professional association for scholars dedicated to creating and disseminating knowledge about management and organizations.
<http://aomonline.org/aom.asp>
- **American Society for Engineering Education.** A nonprofit organization of individuals and institutions committed to furthering education in engineering and engineering technology.
<http://asee.org/index.cfm>
- **Association to Advance Collegiate Schools of Business Exchange.** Features an online community and forum with member-generated content and research for business schools.
<http://theexchange.aacsb.edu>
- **EdiNeb Network.** Represents professionals in educational institutions and corporate learning centers striving for innovation in developing learning platforms. Provides a forum for sharing ideas, presenting theory and research findings and demonstrating practical applications. Includes conferences, workshops, newsletters and online forums.
www.edineb.org
- **European Foundation for Management Development (EFMD).** International membership forum for information, research, networking and debate on innovation and best practice in management development.
<http://www.efmd.org/>
- **International Network for Professional Education and Research in Process and Project Management.** Promotes professional education and research through the exchange of experience across education and research institutions as well as process and project-oriented companies.
www.pmuni.net
- **International Research Network on Organizing by Projects.** Helps project researchers stay informed about conferences and other industry events.
www.irnop.org
- **PMITeach.org: Faculty Resources.** Offers insights for faculty into research funding, publishing opportunities, research communities, academic achievement and classroom resources.
www.pmiteach.org/faculty_resources
- **PMITeach.org: Strengthen Your Program.** Describes opportunities for accreditation.
www.pmiteach.org/strengthen_your_program
- **PMITeach.org: Student Resources.** Serves as a repository for materials relevant to students, including capitalizing on the learning process, how to achieve academic excellence and how to embrace lifelong professional development.
www.pmiteach.org/student_resources