How the University of Limerick Transformed its Project Management Offerings with Two New Master's Degrees

The 41-year-old University of Limerick is an independent, internationally focused school with more than 11,600 students and 1,300 staff members in Limerick, Ireland. In 2012, it was named one of the top young universities in the world by *Times Higher Education magazine*.

This article seeks to identify the factors and techniques that have contributed to the rapid development of two complementary programs—the on-campus master's of science (MSc) in project management and the online MSc in project and program management—through interviews with University of Limerick faculty member John Kelly, PMP, director of the university's Centre for Project Management (CPM); and Alejandro Armellini, PhD, a professor at the University of Northampton, Northampton, United Kingdom.

I. BACKGROUND

A Case for Innovation

The University of Limerick published a strategic plan in 2011 outlining the school's commitment "to forging new ways of teaching and learning for our students and to seeking innovations in research that will advance the economic, educational and social development of our region and the world."

That push included the project management courses of study, which have been evolving at the university for nearly 30 years. The University of Limerick introduced a master's degree in project management (MPM) in 1994, but was looking to create a more robust offering for its students.

Terence O'Donnell, PMI-RMP, PMP, PgMP, director of the Centre for Project Management (CPM) from 2001 to 2005, drew from his long-standing relationship with PMI to strengthen the original courses of study. In 2002, Mr. O'Donnell, a founding member and past president of the PMI Ireland Chapter, helped guide the CPM as it underwent the review process to become a PMI Registered Education Provider (R.E.P.).

By 2009, university officials had issued a directive for program heads to achieve accreditation at the global level. To reach this goal, current CPM director John Kelly, PMP, sought accreditation for the MPM from the PMI Global Accreditation Center for Project Management Education Programs (GAC).

The yearlong accreditation process included a rigorous site visit from GAC on-site evaluators, who examined the program curricula and facilities, and interviewed CPM faculty, university leaders and alumni about the program's content, implementation and support within the school. The CPM program achieved GAC accreditation in January 2010.

Even after the master's program earned accreditation, members of the university's industry advisory board charged Mr. Kelly to further improve the academic programs.[1]

"The [board] recognized a need and tried to shape the profile of the graduates coming from the university to meet that particular need," says Mr. Kelly.

What those industry leaders are preparing for is the coming influx of project-oriented jobs. The number of project-oriented jobs in seven projectized industries will jump to 47.6 million across 11 countries by 2020, a 50 percent increase from 2010.[2]

Start Anew

The University of Limerick also needed offerings that would meet the standards of the European Credit Transfer and Accumulation System (ECTS), which allows students at schools across the European Union to transfer coursework.

The ECTS requires a university's programs meet three main qualifications:

1. Establish a close link between educational programs and labor-market requirements through the use of shared learning outcomes

2. Encourage wider access to and participation in lifelong learning by making programs more flexible and facilitating the recognition of prior achievement

3. Facilitate mobility within a given institution or country, and between institutions, countries, and different educational sectors and contexts of learning (i.e. formal and informal learning)

The MPM wasn't hitting the mark on these qualifications, says Mr. Kelly, and the significant changes required to the curriculum made developing a new program, rather than overhauling the MPM, more appealing.

"We were pushing for the new program in the sense that MPM was around for a long time," he says. "Certainly, after 15 years passed, we found we did need to make some significant changes."

The school's strategic plan, the advisory board's feedback and the need to meet global standards made the development of two complementary programs a high priority at the university.

Mr. Kelly concluded that two new master's of science (MSc) degrees could strengthen the CPM and give the university a competitive advantage by showcasing high-level programs to potential students in a market in which such offerings were few but in demand.

Furthermore, because one of the goals outlined in the university's strategic plan was to increase the number of postgraduate students at the school by 30 percent by 2015, the more appealing MSc options could help drive that postgraduate enrollment rise.

Because of this, the university's Kemmy Business School was focused on offering a range of MSc degrees in finance, economics, management and marketing. "The MSc designation for the project management program was an important step to position it alongside these other offerings," Mr. Kelly says. "It gives project management the credibility of other mainstream disciplines."

One of the new programs would eventually become the MSc in project management, an on-campus classroom experience designed for students who recently completed undergraduate-level, project management coursework.

The second program evolved into the MSc in project and program management, a program offered exclusively online to best reach students outside the region and thus align with the university's strategic plan to connect with a global student body.

But before these programs could come to fruition, Mr. Kelly needed to build a business case to earn final approval for the courses of study from the university's Academic Council, made up of the dean of the Kemmy Business School, assistant deans and administrators.

Because the school's strategic plan required all department heads to develop innovative coursework, Mr. Kelly faced competition for curricular space from numerous areas of studies, including other MSc programs in organizational psychology and human-resource management.

To build buy-in, Mr. Kelly developed several key considerations in approach, program design, presentation and process to show the Academic Council a broad scope of the courses of study.

"From the point of view of the design and content of the programs, we needed to position ourselves to the administration—and in the market—as a leading-edge provider in project management," he says.

II. APPROACH AND PROGRAM DESIGN CONSIDERATIONS

Leverage PMI Resources

Mr. Kelly launched a yearlong development process in September 2010 for the two new MSc programs, although some of the groundwork had already been laid during the GAC accreditation process.

The GAC accreditation process not only aided the CPM in looking critically at the MPM program, it also had another benefit, according to Mr. Kelly. "The feedback from the GAC process was useful for me and our group to negotiate support for the new programs within the university."

For example, recommendations in the peer-review process urged the CPM to upgrade the technology used for online courses to boost student interaction. There was also a suggestion to increase the involvement of full-time faculty in online delivery.

"That's a very useful process," Mr. Kelly says, "to bring in an outside global group to look at our program, the stage the program had been at, and what the appropriate next step would be."

For Mr. Kelly, that "next step" was for the CPM to offer MSc courses of study, so he applied some of the recommendations for the MPM to the MSc to align the course of study with global standards—a requirement the school had set in 2009 when the CPM applied for GAC accreditation for the MPM.

PMI's May 2010 GAC Academic Forum in Milan, Italy provided another valuable resource for Mr. Kelly. There to accept GAC accreditation for the MPM degree, he attended a presentation by online education expert Alejandro Armellini, PhD.

Mr. Kelly used the opportunity to leverage Dr. Armellini's expertise in online learning by sending his staff to Dr. Armellini's Carpe Diem workshop at the Beyond Distance Research Alliance, at the University of Leicester, Leicester, England, where Dr. Armellini was based at the time.

Dr. Armellini, currently a professor at the University of Northampton, Northampton, England, has worked with 20 universities in the United Kingdom, Italy, Denmark, Spain and other countries to develop online education programs.

By attending Dr. Armellini's workshop, Mr. Kelly aimed to foster a curriculum and system that engage learners with content ranging from online books to audio to video. Today's faster Internet speeds allow students to access information in a more timely manner and schools to create a richer learning experience than even a few years ago, when technological limitations made posting PDFs online the only viable option for virtual learning.

And, of course, online education offerings are much more social. One tool Dr. Armellini teaches faculty members to use in his workshop is the wiki, a website that allows invited users to add and delete online content via a web browser. Such a tool brings a level of intimacy online as it can create an atmosphere much like in-person discussions held in a traditional classroom.

Create a Comfortable Setting

To design both programs' general framework, Mr. Kelly and his team built three classes over three months, then developed the next three classes over the next three months.

"We were kind of a continuum on that development cycle," he says.

Mr. Kelly drew from the established faculty pool that had been teaching project management coursework through the university's Kemmy Business School's four departments: accounting and finance, economics, management and marketing, and personnel and employment relations.

"We had a program in existence, and this was a replacement," says Mr. Kelly. "There wasn't a need to go on a recruitment drive because we had people in place."

Instead, he built the classes around the existing talent pool, a cost-saving move for the university.

Though faculty members were familiar with the subject matter, some were uncomfortable with the change to a fully virtual classroom for the MSc in program and project management, Mr. Kelly says.

But the very nature of designing a course can help ease fears, he says.

"The driving force behind [the design] is the learning outcomes. You start at the learning outcome level, and you figure out, 'What do I need to get the student to do to prove to me that he or she has achieved those learning outcomes?'"

III. PRESENTATION CONSIDERATIONS

Identify the Students

The school's strategic plan helped Mr. Kelly determine—and expand—the potential pool of students. "The plan seeks to create a university that is both locally and globally connected," wrote Don Barry, PhD, president of the University of Limerick, in the strategic plan.

Hence, Mr. Kelly focused one program, the MSc in project management, for local students and another program, the MSc in project and program management, for global students.

Feedback from industry leaders played an essential role in developing the rationale for both traditional-classroom and online courses. Two main themes from these leaders, echoed by PMI research[3], are that organizations are expanding their global priorities, and that projects and programs must align with organizational strategy.

The themes appear in the coursework. "Strategic Management and Programs" and "Information and Knowledge Management in the Project Environment," for example, aim to prepare students for high-level thinking within their organizations. The goal is to take the students' understanding to an executive level so they "get an insight into a program as a means of implementing strategy and delivering business value," Mr. Kelly says.

Other offerings were spurred by the GAC accreditation review process. One recommendation was to offer more instruction on people skills; as a result, the school now offers classes such as "Project Leadership and Governance" and "People and Behavior in Projects." Mr. Kelly notes such skills are "essential for students who have great technical skills, such as many in engineering, but when launching a project, struggle with leading a team."

Same Message, Different Delivery

While the subject matter covered in the classroom setting is the same as the online offerings, the medium of delivery makes for some key differences.

The on-campus nature of the MSc in project management led Mr. Kelly to choose a curriculum more geared toward recent college grads with newly minted bachelor's degrees in project management-related fields and little professional experience.

To expand the CPM's global reach and, therefore, satisfy another requirement set forth from the university's strategic plan, Mr. Kelly added to the traditional classroom curriculum a collaboration element between students and participating industry partners.

"I see collaboration as a multi-level concept," wrote Dr. Barry. "It involves working together across disciplines, departments and faculties within the university as well as collaborating with other universities, research bodies, institutes of education, corporations and public institutions, nationally and internationally."

Therefore, the classroom-based MSc in project management requires an action-oriented research project with a professional organization.

Company partners such as computer manufacturer Dell, medical device manufacturer Boston Scientific, and pharmaceutical firm Johnson & Johnson engage with students early in the program to identify potential research projects. Topics include how fixed-price contracts affect national road projects and how to determine the best knowledge-sharing tools for project professionals using an agile approach on software projects.

Throughout the research process, a member of a partner organization mentors a student, who also spends 10 hours a week at the partner organization until graduation.

The virtual MSc in project and program management addresses a key aspect of the school mission: to forge "new ways of teaching and learning for our students."

The two-year online program also achieves yet another strategic goal: to bring University of Limerick's educational offerings beyond campus boundaries.

Such a setting is ideal for the busy professional with at least four years of project management experience, says Mr. Kelly, and the learning environment enables students with full-time project management roles to attend the virtual classroom without time-consuming commutes to a campus.

IV. PROCESS CONSIDERATIONS

Adopt a Team Approach

Dr. Armellini's consultation in the development of the online program did not end with the Carpe Diem workshop. Eleven project management academic experts at the University of Limerick and the learning technologists at the University of Leicester collaborated over a series of months to develop courses and establish the virtual learning environment.

One of the greatest risks of developing a virtual classroom is the rejection of online program components by faculty uneasy with removing coursework from a traditional classroom. "Coming to grips with the technology was the biggest challenge for us as a group," says Mr. Kelly.

Schools can mitigate the risks associated with launching an online program by providing training to all faculty involved and putting them in the same room as the technologists. "There was quite a bit of upfront training to understand the technology and how it supports the learning," says Mr. Kelly.

Bias against online coursework can deter moves into the virtual environment. The project lead must take care to not allow less-enthused faculty members to undermine the project—and nurture those early adopters willing to take on the initiative. A friendly reminder of a common goal can unite both resisters and adapters.

The online setting can also make it more difficult to identify and rectify a flawed learning design because immediate feedback isn't as readily available as it is in the traditional classroom.

To ensure good learning design is achieved virtually, instructions for homework, papers and tests must go through several iterations and pass assessments from faculty peer reviewers who look for clarity. This rigorous process isn't found in the traditional classroom development since professors can rely on in-person communication to answer students' questions.

Along with peers, e-learning technologists can be a powerful force in helping faculty transition to online coursework. "The technologist is the person who familiarizes the faculty with the technology, shows them how it works and basically handholds the academic as he or she is providing instruction, in terms of design," says Mr. Kelly.

At the University of Limerick, the e-learning technologist also helps the students adjust to online learning. "The e-learning technologist takes students through the process and gets them to do simple tasks to make sure they can get access to library sources, they can post something on a discussion forum and so on," says Mr. Kelly.

V. CONCLUSION

The first cohort of 23 students for the on-campus MSc in project management graduated in December 2012. The first 20 online students—primarily Irish expatriates living in nine countries throughout Europe, the Middle East and Australia—are scheduled to graduate in 2014.

For the on-campus MSc program in project management, the action-oriented research project with a professional organization has earned positive feedback from both industry partners and students, and has led directly to job offers for graduates.

With one class graduated, Mr. Kelly reviewed the program with CPM members and reviewed student feedback cards. A couple of minor changes were made, such as replacing a topic from one course when it was also covered in another class.

"We will take it through a couple of cycles before any major changes are considered," says Mr. Kelly.

Students in the online MSc in project and program management have begun their second year of the program, and both Mr. Kelly and Dr. Armellini are currently tracking successes and issues with the course of study.

The on-campus MSc in project management had GAC accreditation conferred in April 2013. The CPM at the University of Limerick will apply for GAC accreditation of its online program once the first class of students has graduated.

From Mr. Kelly's viewpoint, both new courses of study continue a longtime effort from the university. "We have been one of the leaders across the globe," he says. "From a very early stage, the school participated in project management because it was something that was of very significant importance to business and to business success."

And Mr. Kelly expects his courses of study to have continued success, too. "We want to see ourselves as forerunners in project management coursework."

Next-Generation Curriculum

Before the University of Limerick could offer the MSc courses of study to the public, John Kelly, PMP, the director for the university's Centre for Project Management, needed approval of the coursework from the school's Academic Council of deans, assistant deans and administrators.

Based on support in the development he received from PMI, industry leaders and university administration, Mr. Kelly concluded that project management students needed a curriculum that provided professional development in two key areas:

Power to the People Skills

The PMI Global Accreditation Center for Project Management Education Programs reviewed the university's master's degree in project management (MPM) in 2010.

Suggestions made for that program helped Mr. Kelly improve both MSc course offerings. One recommendation was to increase instruction on people skills, so the school introduced several new courses, including:

- **People and Behavior in Projects**
  Students learn to analyze human behavior at individual, team and organizational levels.

- **Project Leadership and Governance**
  The sustainability and corporate and social responsibility themes emerging from social sciences provide a framework for day-to-day decision-making.

- **Information and Knowledge Management in the Project Environment**
  Addresses how advances in communication technology are shifting the nature of data, information and knowledge as organizational resources—and how project leaders must evolve, too.

Big-picture Thinkers

Members of the university's industry advisory board highlighted the skills and experience business leaders wanted from graduates with project management degrees.

Two main issues from the advisory board emerged: Organizations are expanding their global priorities, and projects and programs must align with organizational strategy.

Mr. Kelly added the following classes to prepare students to think beyond the triple constraint:

- **Strategic Management and Programs**
  Provides a critical overview of the dimensions of corporate strategy and implementation, with a focus on program management competence as a lever of strategic renewal.

- **Project and Program Management: Science and Principles**
  Provides a high-level perspective in developing organizational goals and objectives, and translating these into portfolio and program objectives. Project and program baseline models are developed, as well as adaptation and integration of tracking and control systems used to monitor and control progress throughout project and program life cycles.

- **Program Value, Risk and Decision-making**
  Focuses on the process framework used to develop business models and value solutions through projects and programs and includes insight into models of benefits management and benefits realization tracking throughout program life cycles.

- **Commercial Management of Projects**
  This class draws on elements of economics and finance with foundations in mathematical techniques that provide grounding in all financial, budgeting and tracking issues relating to project finance and cost management.

- **International Project Management**
  Combines the essentials of project management with social science disciplines associated with managing cultural diversity, heterogeneous stakeholders, intercultural communication, and global cooperation and collaboration.

Meet the Educators

Graduate-level courses of study have been offered at the University of Limerick for nearly two decades, so the school was able to tap faculty members from its existing human resources pool for its new master's of science (MSc) in project management and the MSc in project and program management. They are:

Dan Aherne, PMP, a lecturer in project management and course director for the MSc courses of study, has over 20 years experience in manufacturing.

Therese Brady, PhD, a lecturer in human resources, is the director of Lighthouse Organisational Consultants, a management development firm in Limerick.

Catriona Burke, PMP, a lecturer in project management, has led numerous projects and programs of great complexity.

Paul Maguire, a lecturer in project management, has more than 30 years' experience in project management and organizational change.

Conor Mooney was the lead project manager on a £580 million urban renewal project in Cork, Ireland, prior to joining the university in 2009 as a lecturer in construction management and engineering.

Terence O'Donnell, PMI-RMP, PMP, PgMP, former director of the Centre for Project Management, develops and directs research projects between students and organizations. His longtime connections with members on the industry board facilitate the university's relationship with businesses.

1   Members include: Paul Maguire (director of strategic initiatives, HP), Mick Lynam (director, Project Management Group), Terence O' Donnell (projects and consulting director, IT Alliance Group) and Helen Ryan (CEO, Creganna-Tactx Medical).

2   PMI Project Management Talent Gap Report, Project Management Institute and Anderson Economic Group, 2013

3   PMI Pulse of the Profession™, Project Management Institute, 2013