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Panel: Exploring Approaches to IT Project Management Pedagogy

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OPENING REMARKS

Universities with information technology (IT) programs often include capstone project management courses in their curricula (1) to insure that students graduate with necessary IT knowledge, skills, and professional attitudes, (2) to demonstrate that students can apply the knowledge and skills learned from earlier courses to simulated projects or real projects in organizations, and (3) to prepare students for careers in the application of information systems and technology. A group of IT project management professors has been meeting over the past six months to collaborate on several proposed student IT project management events. As a result of these meetings, we became aware of the very different but innovative approaches we use to support student learning in IT project management courses. These approaches include variations of team-based project simulations, case studies, and collaborative real-life client projects.

The purpose of this panel is to explore the different and innovative approaches used in our project management courses and share their advantages, disadvantages, and lessons learned. The panel format also allows the audience to ask questions, raise potential issues, and to share their own student project management experiences.

PANELIST PROJECT MANAGEMENT STATEMENTS

Monica Adya: The undergraduate project management course offered at Marquette University represents a synergistic interaction between project management skills and off-shoring of business functions. Students enrolled in this course work on two month long projects with cross-disciplinary teams in India and Scotland using communication technologies that range from e-mail to live videoconferencing sessions. Project managers in this class are challenged to manage multiple projects, evaluate two very diverse project settings, and manage projects in more unstructured environments than they are used to. Monica Adya will discuss (a) the execution of this multi-project environment from a process and technologies standpoint; (b) challenges and opportunities of teaching this class to undergraduate students; and (c) facilitating a cross-disciplinary environment in a virtual mode.

Katia Passerini: The need for NJIT's undergraduate 'Project Management for Managers' was documented by a year-long study with large financial services employers in the Northern New Jersey area who lamented that students were lacking team and project management skills when they entered the workforce. The course meets twice a week using both a lecture and laboratory approach to teach theory and then apply concepts learned in class during the laboratory sessions, using software such as MS Project, MS Visio, and other office productivity applications. Student progress is assessed weekly with short quizzes and laboratory assignments. The objective of the frequent multiple-choice quiz assessment is to familiarize students with the Project Management Institute (PMI) 'Certified Associate in Project Management (CAPM)' certification requirements and empower them to apply for certification, which recognizes their demonstrated understanding of the fundamental knowledge, processes, and terminology as defined in *The Guide to the Project Management Body of Knowledge (PMBOK® Guide)* as soon as possible upon course completion. In addition, student teams present weekly short cases in project management. A final comprehensive case, which challenges teams to present an alternative project solution to a company they reviewed

in their case analysis, is part of the end-of-semester deliverables. While results from this approach are still being evaluated, preliminary outcomes show a high student commitment and satisfactory results.

Karen Patten: Students in the undergraduate IT program at USC are required to take an experiential learning capstone IT project management course. The program uses three of the ACM recommended approaches to experiential learning: real-life capstone IT projects for businesses and non-profit organizations, internships with local IT organizations and businesses, and hands-on instruction. These three approaches insure that students receive grounded experiential learning throughout their coursework. Regional industry employers describe the IT program's graduates as employees who are productive immediately upon employment. Graduates of the program report that they are progressing in their careers, steadily increasing the scope and level of their responsibilities. Student project teams are assigned real client projects from small businesses or non-profit organizations where they must develop and manage information technology-related projects for clients who need computer networks, database systems, websites, and/or technology training. The students gather client needs, develop prototypes, receive client feedback, and deliver fully functional web sites, network designs, databases, or IT training. Students are expected to apply their knowledge and skills from all their previous coursework in the capstone project management course, which uses the PMI's *PMBOK® Guide* as its text. Students also join the local chapter of PMI, where they meet and work with professional IT project managers. Each year, the results of the real student projects are presented at a PMI chapter meeting. The experiential learning approach has evolved since 2004 when service learning techniques were first introduced into the capstone course.

Carol Pollard: The undergraduate project management course at Appalachian State University is an elective course that students take to prepare for the practice of professional project management. Students plan and manage projects through the use of case studies and project management tools. Student teams address many important IT project management issues such as estimation, scheduling, budgeting, version control, progress tracking, change, risk and crisis management, resource management, motivation, and leadership.

Russ Robbins: Planning, organizing, staffing, and controlling projects require traditional management skills as well as an appreciation of the tools, techniques, and practices unique to project management. The undergraduate project management course in the management information systems program at the University of Pittsburgh includes an overview of project management concepts; focuses on project planning, estimating, monitoring, and controlling; and covers topics related to being effective project leaders and managers of project teams. The course also uses PMI's *PMBOK® Guide*, as its text, which documents the knowledge and practices needed by today's project managers. This guide, along with current research and management trends related to project management, provide the framework for material covered in this class.

BIOGRAPHIES

PANEL FACILITATOR

Dr. Robert G. Brookshire is Professor and Director of the Technology Support and Training Management Program at the University of South Carolina, Columbia SC. He teaches technology project management, database management, and web development. He holds an A.B. from the University of Georgia, an M.Ed. from Georgia State University, and a Ph.D. from Emory University. He has taught at North Texas State University, the University of Virginia, and James Madison University. He is the co-author of *Using Microcomputers for Research* (Sage Publications, 1985), and his articles have appeared in the *Journal of Computer Information Systems*, *BYTE*, *Social Science Computer Review*, *Legislative Studies Quarterly*, *The European Journal of Operational Research*, and other journals. He is past president of the Organizational Systems Research Association and editor of the *Information Technology, Learning, and Performance Journal*.

PANEL PARTICIPANTS

Monica Adya is an Associate Professor at Marquette University. She teaches Project Management, Introduction to IT, Systems Analysis and Design, and Global Technology Experience – Study Abroad Trip to India. She conducts research in the area of IT workforce, particularly women in technology, as well as knowledge management as applied to forecasting domains. Dr. Adya received her Ph.D. from The Weatherhead School of Management, Case Western Reserve University. She has published in *Human Resource Management*, *Information Systems Research*,

Information Technology & People, International Journal of Forecasting, Journal of Forecasting, and Journal of Global Information Management among others.

Katia Passerini is an Associate Professor and the Hurlburt Chair of Management Information Systems at the School of Management of the New Jersey Institute of Technology (NJIT) where she teaches courses in MIS, Knowledge Management, Project Management, and IT Strategy. Her research interests are in computer-mediated learning, IT productivity, and knowledge management. Dr. Passerini is a certified project manager professional (PMP®) and earned an MBA in International Business and a Ph.D. degree in Information Systems from the George Washington University, USA. She has published in *Communications of the ACM, Communications of AIS, Society and Business Review, Journal of Knowledge Management, Computers & Education, Journal of Educational Hypermedia and Multimedia, IEEE Internet Computing, and Project Management Network, Cutter IT Journal, and Cutter Benchmark Review*. Her professional background includes multi-industry projects at Booz Allen Hamilton and the World Bank where she worked on information technology projects in Europe, North America and the South Pacific.

Karen P. Patten is an Assistant Professor in the Technology Support and Training Management Program at the University of South Carolina, Columbia SC. She teaches IT Project Management, Telecommunications, Networking, and Hospitality-related IT. Her research interests include agile IT management, mobile telecommunications management, and IT curriculum development. Dr. Patten has a B.S. in Economics from Purdue University, an M.S. in Transportation Engineering from the University of Minnesota, and a Ph.D. in Information Systems from the New Jersey Institute of Technology. She is the author of *Data Networking Made Easy* for small business owners and has published articles in *Communications of the Association for Computing Machinery, Communications of the Association for Information Systems, Cutter IT Journal, and the International Journal of Computers, Systems and Signals*. Her professional background includes IT and telecommunications management at AT&T and Bell Laboratories, where she managed the deployment of numerous emerging technology projects throughout the United States.

Carol E. Pollard is an Associate Professor at the Walker College of Business and the Research Director of the Center for Applied Research in Emerging Technologies (CARET). Carol came to Appalachian State after spending six years in the School of Information Systems, University of Tasmania, Australia. During her time in Australia, she served as Head of School and Postgraduate Coordinator of the Ph.D. and Masters programs. Prior to her time in Australia, Dr. Pollard held academic positions at the University of Colorado-Boulder, University of Calgary, Canada, and Duquesne University. Dr. Pollard, has considerable experience developing, implementing, and teaching a number of innovative undergraduate, graduate, and executive programs in three countries and has a special interest in the cultural aspects of IS research and the internationalization of IS teaching. Her research interests included decisions support systems, impact of emerging technologies, technology transfer, and strategic alignment. Dr. Pollard has a B.S. from the University of Pittsburg – Greensburg, an MBA from the University of Pittsburgh, and a Ph.D. from the University of Pittsburgh. Dr. Pollard has published in *MIS Quarterly, Journal of Management Information Systems, Information and Management, Journal of Organizational Computing, and International Small Business Journal*. She served as the Executive Secretary of ICIS from 1996 to 1999 and is currently Vice President, International of the Global Information Technology Management Association and Chair, ACIS Executive Committee.

Russell Robbins is a Visiting Assistant Professor of business administration in the Joseph M. Katz Graduate School of Business and College of Business Administration at the University of Pittsburgh. He teaches IT Project Management and Virtual Teams and Collaborative Technologies. His research interests include decision sciences, operations, and information technology. Dr. Robbins received a B.S. in Business Administration from the University of Missouri-Columbia, an M.S. in Accounting from Binghamton University and an M.S. in Information Technology from Rensselaer Polytechnic Institute, and a Ph. D. in Engineering Science from Rensselaer Polytechnic Institute. He has published in *Journal of Information Systems Education, Journal of Education for Library and Information Science, and Decisions Support Systems*.