

An MS Project Management Program A Position Paper

Robert K. Wysocki, PhD
President, EII Publications, LLC
11/25/2015

Almost without exception graduate level programs in project management focus on the enabler role. It is primarily an operational level role where the project manager executes a project for a client. The project could be operational, tactical or strategic. The client could be internal to the organization or as a customer of a professional services firm. Many of the program curricula that support this enabler role are nothing more than a collection of courses that describe the knowledge areas and processes of the PMBOK. These programs focus on preparing students to sit for certification examinations rather than preparing them for senior level project management consulting and management careers. These programs have a "how to" focus which is not the level expected in graduate programs. In my opinion a curriculum that focuses exclusively on the enabler role is not a graduate level program. It is more vocational than professional.

A graduate level program in project management should have tactical and strategic level formation components that prepare students for upper level careers in project management and members of the C-levels and executive levels of the enterprise. Modern project management is less than 50 years old and has not matured to that level yet. My long term goal is to see a project management executive with a seat at the strategy table. They have a contribution to make that goes far beyond the enablement role they now occupy. This graduate level program is a first, but significant, step in that direction.

Prior knowledge, certifications or experience related to project management are expected as a prerequisite for entry into these graduate programs. Having such a prerequisite among graduate programs in project management sends a clear signal that this program is not entry level. Rather it caters to mid-career professionals. The proposed MSPM Program teaches operational level project managers how to think like project managers in the context of generating business value for the enterprise. That business value derives from tactical and strategic contributions. The MSPM Program prepares them not only for their first professional position in project management but also with the tools to advance along a career path leading to senior level positions as consultants or managers of project management. Such a program is exemplary among project management education programs.

This document describes an MSPM that is unique and innovative. Unlike most graduate programs in project management this program is not a program for entry level practitioners. It has been designed for the mid-career professional. In that sense it might be seen as disruptive of what the education community expects. That raises challenges to design and implementation. However, the program proposed here is compliant with PMBOK and aligns with the PMI CAG, AACSB and the BCS accreditation standards and guidelines.

The Challenges of Managing Complex Projects

Project failure rates continue at a 35% level. Among the several root causes I want to focus on training and education of the complex project manager. It has not measured up to the needs.

At the extreme complex project goals define a desired end state. Reaching that end state is a journey into the unknown. At the outset the project team may have little insight into how, if at all, the desired end state can be reached. If it can, it will be through some type of iterative process of learning and discovery. In any case these journeys are fraught with high risk and high failure rates. An effective project management approach will have an early detection and redirection away from probable failures towards more fruitful approaches.

Complexity brings uncertainty and the resulting impact on projects is significant and challenging from a manager's perspective. Let me try to put this in a context that relates directly to the role of the MSPM student and how it can contribute to project management across the enterprise.

A recent worldwide survey (IBM, 2010, "Capitalizing on Complexity: Insights from the Global Chief Executive Officer Study" GBE03297-USEN-00) conducted by IBM from 9/2009 through 1/2010 reported that over half of the 1541 executives from the 60 countries that they interviewed admitted that they were not prepared to support the complex and uncertain environment in which they were forced to conduct business and they didn't know what to do about it. If that isn't a clarion call to action, I don't know what is.

**The MS PM Program described here answers this call.
It will have a systemic impact on the organization
and can be disruptive of its business processes.**

The following quote from the IBM report highlights the efforts of standout organizations to manage complexity and uncertainty. Their efforts provide a roadmap for us to design this curriculum.

“The effects of rising complexity call for CEOs and their teams to lead with bold creativity; connect with customers in imaginative ways, and design their operations for speed and flexibility to position their organizations for twenty-first century success. To capitalize on complexity, CEOs must:

Embody creative leadership.

CEOs now realize that creativity trumps other leadership characteristics. Creative leaders are comfortable with ambiguity and experimentation. To connect with and inspire a new generation, they lead and interact in entirely new ways.

Reinvent customer relationships.

Customers have never had so much information or so many options. CEOs are making "getting connected" to customers their highest priority to better predict and provide customers with what they really want.

Build operational dexterity.

CEOs are mastering complexity in countless ways. They are redesigning operating strategies for ultimate speed and flexibility. They embed complexity that creates value in elegantly simple products, services and customer interactions.”

Graduate level studies in project management are needed at the tactical and strategic levels in order to position the enterprise to compete effectively in its markets. Creativity and flexibility seem to be the watch words in today's markets. Project management has a contribution to make and these programs must focus on proactively supporting tactical and strategic formation rather than being limited to reactive operational level enablement. Having a proactive role justifies a seat at the strategy table for project management.

MSPM Program Rationale

Current graduate level project management programs are focused at the operational level - the "how to" level. Many are nothing more than a collection of courses that describe the Knowledge Areas and Processes of the PMBOK under the guise that it is graduate level education. The curriculum described herein is a more in depth study without equal in the market. Current graduate level programs are almost exclusively operational level and discuss the "enabler role" of the project manager. That role is certainly important but there is much more that is needed to fill the remaining gaps and address the management requirements identified in the IBM CEO Study. The tactical and strategic levels are ignored in the existing programs. The enabler role has been recognized at the tactical and strategic levels but only passively and that is not the point. The project manager can contribute beyond the passive enabler role to both tactical and strategic formation. The current reality is unfortunate because there are important but ignored parts of the project management discipline. I am advocating an active tactical and strategic role for the project manager. This is new and is the purpose of the curriculum described herein.

Recent trends indicate a convergence of project management and business analysis in order to position the enterprise for the complex and uncertain global markets. That thread runs consistently through this curriculum. The focus is on the delivery of business value at the project, program and portfolio levels. In that sense it presents a holistic view of project management at the enterprise level.

MSPM Program Objectives

These objectives are designed into both the credit and non-credit versions of the curriculum:

- to prepare for continued growth in a project management career and provide the knowledge to rise in the profession to a director level position
- to prepare for the future growth of the project management profession regardless of how the tactical and strategic role of project managers, program managers, portfolio managers and program directors might evolve
- to establish a dynamic and creative approach to managing complex projects
- to instill the capabilities and awareness to take a leadership role in creating a project-driven environment across all levels of the enterprise

MSPM Program Curriculum Model and Design Rationale

The Program is consistent with established adult learning theory and designed around the six principles of adult learning defined by Malcolm Knowles (2011, *The Adult Learner, 7th Edition*, Taylor & Francis):

- Adults are internally motivated and self-directed

- Adults bring life experiences and knowledge to learning experiences
- Adults are goal oriented
- Adults are relevancy oriented
- Adults are practical
- Adult learners like to be respected

In order to meet the Program Objectives the Curriculum Model must be based on an integration of topics from three disciplines and the integrating Capstone Course:

- **Project Management**
 - Introduction to the Effective Complex Project Management
 - Advanced Effective Complex Project Management
 - Risk Management
 - Human Resource Management
 - Program/Portfolio Management
 - Enterprise-Level Project Management Seminar
- **Business Analysis**
 - Introduction to Business Analysis
 - Business Process Management
 - Business Systems Engineering
- **Information Systems**
 - Introduction to Information Systems Management
- **Capstone Team Project/Thesis**

The integrated curriculum is shown in Figure 1. Each course is designed around a practical and realistic learning model that is project-driven and uses real exercises that are team-based. When on the job, students will complete most assignments using some form of team effort so it is only appropriate that students learn in a team-based environment. Adopting this approach exposes students to the team environment and how to deal with the issues that arise and do it in a non-threatening environment. You can't get fired by taking a course!

The design rationale is compliant with trends and needs in complex project management. Project management and business analysis are trending towards an integrated discipline in order to effectively support the complex project world. The glue that holds this emerging discipline together is technology and the internet. Hence all three disciplines create the essential recipe for complex project management success.

This is a 30 credit program with three streams: strategic, tactical project management and tactical business analysis. The Orientation is an important introduction to the program. It offers a brief summary of each of the three streams and the courses that comprise them. The capstone course is a three semester experience and can be either a team project or individual thesis option. The team project begins early in the second semester or after the three introductory courses are complete. The thesis is an individual effort also begun after the three introductory courses are complete. The student can choose either option for their capstone experience. A hypothetical case study is introduced in the Introduction to Effective Complex Project Management course and carried through to each course in the curriculum. A number of team-oriented exercises based on the case study are used to practice course content.

These courses form a cohesive package and are designed to fit together according to the pre-requisite structure shown in the figure. This curriculum does not exist anywhere. Only a few programs have made minor inroads at the tactical and strategic levels.

The MS PM Program described here answers the call to action by the CEOs. It will have a systemic impact on organizations but at the same time it can be disruptive of the existing PM programs offered by the higher education community.

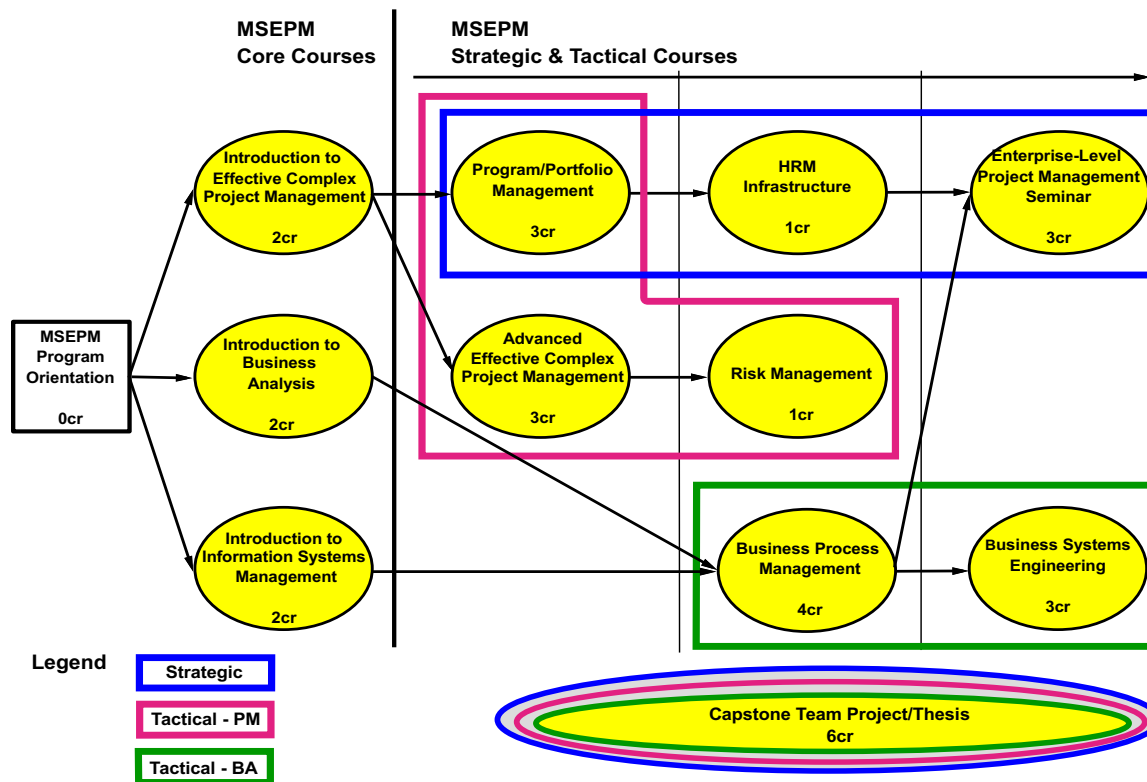


Figure 1: MSEPM Curriculum Map

MSEPM Program Course Materials

The tactical and strategic themes are new to the project management discipline and so the teaching materials are lacking at present. This will be disruptive until the text books catch up with the curriculum. It isn't that there aren't teaching materials for each of the courses but those materials are not integrated. The proposed curriculum is project-based and team-driven. Existing text books are not designed for such delivery systems. That places a temporary burden on the faculty. Articles and blogs have sufficient content but will require some effort to research, collect and integrate.

I have put tentative course descriptions together. They are posted below. I have included books in print that I am familiar with. Those books satisfy the course content as closely as possible.

Further research will be done to find better references if such references exist. If not, then articles and other materials will have to be developed or collected. These materials provide the content. That content will have to be integrated and repackaged into an online delivery format.

MSEPM Program Marketing Strategy

One internet source lists 139 online graduate level programs in project management. At present there is a feeding frenzy within the college and university community to create such programs. I suspect the real number is much larger. The MOOCs are adding to that frenzy. So any Program will have to have a differentiating strategy to even get noticed among the competitors. Buyers are often not discriminating buyers and can be choosing programs for the wrong reasons.

What factors does the proposed MSEPM Program possess that might form a differentiating strategy for any institution wishing to adopt this model?

- Project-based
- Team-driven
- Integrates real world learning opportunities
- Adaptable courses
- An integrating Capstone Course
- Customized to fit the institution's needs and markets

These factors are seldom found in graduate level project management programs and so provide the input to the formation of a good differentiating strategy.

The market for this MSEPM Program is not an entry level market. The curriculum is designed to take a practicing project manager into the tactical and strategic level applications of project management. While the enabler role is a critical part of their tactical and strategic roles it is not sufficient. At the tactical and strategic levels the project manager has a solution formation role. This is especially evident in the complex project manager space. In this space solutions and even goals may not be clearly specified. They must be learned and discovered and that goes far beyond the enabler role. The formation role is a creative role and the best efforts of the enterprise will be needed to succeed.

Challenges

There are several challenges to implementing this Program. This Program, is very different than any currently being offered. Some of the more critical challenges are:

- The tactical and strategy formation focus is new among graduate level programs in project management and will itself be a differentiating factor. The challenge will be to create the demand in the market for such a program.
- This Program works best in an instructor-led traditional classroom structure. Blended format can also work well. The online market is much larger and the delivery system will be challenged to reach this market. There are a few online logistics problems due to the fact that teams may not be collocated. A Learning Management System (LMS) is needed to support the imposed constraints to real time communications. That is actually a benefit because real projects are usually staffed by remote team members anyways. So this environment presents a good learning opportunity.

- While there are books in print that cover the topics the books are not integrated. So there is a burden on the instructor to provide that integration. Most text books are written under the assumption that the students listen to the traditional lecture and follow it with some appropriate homework assignment. Real project practice is seldom included.
- Project-driven curricula have not been used to any extent. Current programs pose projects after the content has been developed. In line with adult learning models this Program uses projects to drive content, learning and practice.
- This Program is best presented in an instructor-led format but market demands for online programs must be accommodated too. This puts additional challenges on courses that are project-driven and team-based.
- The ECPM Framework is relatively new to the discipline. It reflects the contemporary world of projects and their delivery of business value in the face of complexity and uncertainty. Faculty will have to accommodate the new thinking into their teaching. The ECPM Framework utilizes a vetted portfolio of tools, templates and processes that are familiar to all project management faculty so that adjustment is minimal. The ECPM Framework is PMBOK-compliant.
- A strong argument can be made for linking project management and business analysis. That will be a new direction needed for successful complex project management and the delivery of business value from tactical and strategic perspectives.

My advice is that it will take the collective participation of a village to deliver a much needed Program. Starting with the in-class delivery format may be the best choice. Once stable the in-class courses can be adapted to the online delivery format.

Course Descriptions

The following pages offer the first draft course descriptions for the 11 courses identified in Figure 1. These should be seen as works in process. A Task Force will take these to the next level of detail in preparation for integration into the current curriculum to be followed with course design and development for both real time instructor-led and online delivery formats.

While the course names are not unique it is important to keep in mind that the course contents go beyond the expected. Every course is focused on establishing and developing the tactical and strategy formation roles of project management. This is unique among existing project management curricula. It is a step into the known and for that reason will be a work in process for some time.

Introduction to the Effective Complex Project Management

Course Description

This is the first of a two course sequence for the Effective Complex Project Management (ECPM) Framework. A course in complex project management should be part of the core. For most graduate programs that is not the current practice however. It introduces the world of complex project management and examines the project management landscape through the perspective of linear, incremental, iterative, adaptive and extreme models of Project Management Life Cycles (PMLC). Using these models, adapting them and maintaining them throughout the life of the project is a major focus of this course. It also sets the foundation for a more in depth study of complex project management at the operational, tactical and strategic levels.

Pre-requisite(s)

Prior knowledge, certifications (i.e., PMP, IPMA-D), or experiences in project management is expected.

Major Topics

- Definition of a Complex Project
- Contemporary Project Landscape
- Project Life Span Phases: Ideation, Set-up, Execution
- Co-manager Model and Client Involvement
- Requirements Elicitation and Iterative Decomposition
- Project Management Life Cycle (PMLC) Models
- Choosing and Adapting a PMLC Model
- Tools, templates and processes for Complex Project Management

Assigned Materials

- Wysocki, Robert K., (2014). *Effective Complex Project Management: An Adaptive Agile Framework for Delivering Business Value*, (Plantation, FL: J. Ross Publishing)

Supplemental References

- Wysocki, Robert K., (2014). *Effective Project Management: Traditional, Agile, Extreme, 7th Edition*, (New York, NY: John Wiley & Sons Publishers)

Introduction to Business Analysis

Course Description

Business Analysis has become a critical skill for the contemporary business unit and should be part of the MBA Program core. It introduces the student to the function of business analyst and their role in providing business analyst services to help their enterprise achieve its business goals. Business analysis involves analyzing and synthesizing information provided by a broad constituent group as to how a particular business process functions or should function in order to achieve maximum benefit to the enterprise. In carrying out this objective the business analyst interacts with project managers and IT professionals.

This course aligns with the IIBA CBAP certification examination.

Pre-requisite(s)

Prior knowledge, certifications (i.e., PMP, IPMA-D), or experiences in project management is expected.

Major Topics

- What is a Business Analyst and Why are They Needed?
- What is the Business Analysis Life Cycle?
- The Business Analyst's Role in Strategic Planning
- The Business Analyst's Role in Enterprise Analysis
- Requirements Elicitation, Analysis and Documentation
- The Business Analyst's Role in Complex Project Management

Assigned Materials

- Carkenord, Barbara A. (2009). *Seven Steps to Mastering Business Analysis*. (Fort Lauderdale, FL: J Ross Publishing, Inc. ISBN 978-1-60427-007-5)

Supplemental References

- International Institute of Business Analysis (2009). *A Guide to the Business Analysis Body of Knowledge (BABOK Guide), Version 2* (Toronto, Ontario, Canada, IIBA, ISBN 978-0-9811292-1-1)
- International Institute of Business Analysis (2011). *The Agile Extension to the BABOK Guide* (Toronto, Ontario, Canada, IIBA, November 2011 Draft for Public Review)

Introduction to Information Systems Management

Course Description

This is usually a core requirement in MBA Program. The course introduces the role of information systems in the business model. Data, information and knowledge are defined. The business model is discussed as an interaction of dependent systems.

Pre-requisite(s)

Prior knowledge, certifications (i.e., PMP, IPMA-D), or experiences in project management is expected.

Major Topics

- Process model for linking business analysis, enterprise architecture and information technology in Complex Project Management
- Aligning business processes and architecture with the strategic plan
- The role of information in driving the strategic plan
- Enterprise and business process architecture
- Information technology as the enabler
- The Information Systems Professional's Role in Complex Project Management

Assigned Materials

- Rainer, R. Kelly, Hugh J. Watson and Brad Prince (2013). *Management Information Systems, Second Edition*. (New York, NY: John Wiley & Sons, ISBN 978-1-118-44359-4)

Program/Portfolio Management

Course Description

Projects are usually part of a program or a portfolio. That raises management challenges unique to programs and portfolios. This course introduces the management of such project situations. It is also introductory of the more comprehensive study of the management of projects within the strategic context of the enterprise discussed in the Enterprise-Level Project Management, the capstone course in the CIAPM Curriculum.

Pre-requisite(s)

- Introduction to Business Analysis

Major Topics

- An Agile Portfolio Management Life Cycle
- Establishing a Portfolio Strategy
- Evaluating Project Alignment to the Portfolio Strategy
- Prioritizing Projects
- Selecting a Balanced Portfolio
- Managing Active Projects
- Implementing Agile PPM

Assigned Materials

- Bible, Michael and Susan Bivins (2011). *Mastering Project Portfolio Management: A Systems Approach to Achieving Strategic Objectives*. (Boca Raton, FL: J. Ross Publishing ISBN 978-1-604-27066-2)

Supplemental References

- Kendall, Gerald I. and Steven C. Rollins (2003) *Advanced Project Portfolio Management and the PMO: Multiplying ROI at Warp Speed*. (Boca Raton, FL: J. Ross Publishing, ISBN 1-932159-02-9)
- Krebs, Jochen (2009) *Agile Portfolio Management* (Redmond, WA: Microsoft Press, ISBN 978-0-7356-2567-9)
- Wysocki, Robert K., (2009) *An Agile Approach to Resource-Constrained Project Portfolio Management*. (Arlington, MA: Cutter Consortium, Executive Report, Vol. 10, No. 9)

Human Resource Management Infrastructure

Course Description

This is not intended as a comprehensive course in human resource management. rather it is specifically focused on the HR infrastructure needed to support the tactical and strategic formation roles of project management. The ECPM Scope Triangle is constrained by Cost, Time and Resource Availability. The ECPM Framework will not work unless there is a comprehensive Career & Professional Development Program in place. Its primary objective is to maintain a balance between the supply and demand for skilled project managers and team members. That balance must be sustained over the life span of the project portfolio. This is a complex undertaking. Obviously it is the constraining factor for portfolio management. This course examines the required infrastructure, its design, implementation and maintenance.

The course includes a project that surveys the commercial software applications market to assess the degree to which the software industry has met the infrastructure requirements. Gaps will be identified and analyzed.

Pre-requisite(s)

- Program/Portfolio Management

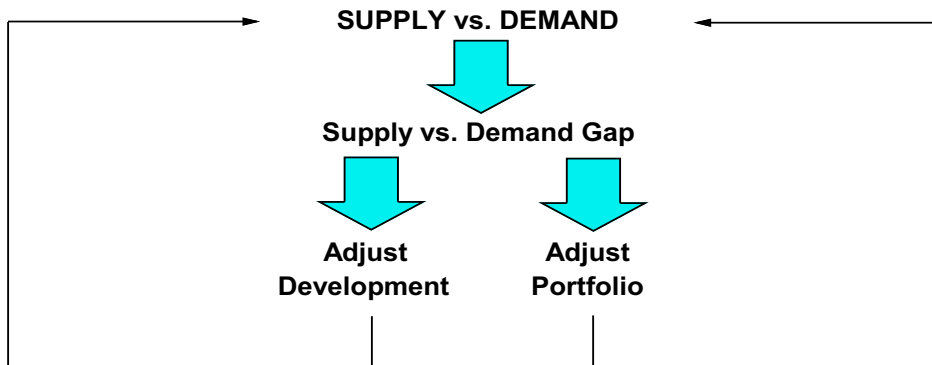
HR Supply vs. Demand Equation

SUPPLY SIDE

Position Family
 Skills Profile by Position
 Professional Development
 Training Program & Schedule
 Skills Inventory over time

DEMAND SIDE

OST Model
 Project Proposal
 Portfolio Management
 Project Performance Review
 Skills Requirements over time



ADJUSTMENTS

The Supply-Demand Gap runs over the portfolio life span and it can include several different positions from the position family. Managing the Gap usually involves scope change and schedule delays in the short-term and career path adjustments in the longer term. The adjustments are not formula driven. They are iterative and involve not only what projects are approved and scheduled but also adjustments to the project plans and schedules to relax any resource contention problems. Adjustments should be done at portfolio reviews (probably quarterly). This process demands a creative approach.

The decision maker needs a process for picking alternatives in some logical pattern and evaluating their impact on the long term portfolio schedule.

Major Topics

- Human Resource Process
- Project Manager Position Family
- Project Manager Skills Profile
- Career & Professional Development Program
- Balancing the Supply/Demand Equation for ECPM

Assigned Materials

- Wysocki, Robert K. and Kathleen B. Haas, (proposed and in preparation). *Effective Complex Project Management: Team Formation and Management Models to Maximize Business Value.*

Supplemental References

- Wysocki, Robert K., (2014). *Effective Complex Project Management: An Adaptive Agile Framework for Delivering Business Value*, (Plantation, FL: J. Ross Publishing)
- Wysocki, Robert K., (2014). *Effective Project Management: Traditional, Agile, Extreme, 7th Edition*, (New York, NY: John Wiley & Sons Publishers)
- Wysocki, Robert K., (2008). *Are You a Cook or a Chef? Succeeding in the Contemporary World of Project Management* (Arlington, MA: Cutter Consortium, Executive Report, Vol. 9, No. 10)
- Wysocki, Robert K., (2011). *The Business Analyst/Project Manager: A New Partnership for Managing Complexity and Uncertainty* (New York, NY: John Wiley & Sons Publishers)
- Wysocki, Robert K., (2011). *What is a Complex Project Manager - Really?* (Arlington, MA: Cutter Consortium, Executive Report, Vol. 12. No. 5)

Advanced Effective Complex Project Management

Course Description

This course examines data and information as a corporate asset and presents a process model that integrates business analysis, enterprise architecture and information technology at the management level. The course takes a strategic, tactical and operational level view.

Pre-requisite(s)

Introduction to Effective Complex Project Framework

Major Topics

- The ECPM Project Set-up Process
- ECPM Project Execution Process
- Complex Project Team Building
- Integration to the Enterprise Strategic Planning Process
- Challenges to Senior Management

Assigned Materials

- Wysocki, Robert K., (2014). *Effective Complex Project Management: An Adaptive Agile Framework for Delivering Business Value*, (Plantation, FL: J. Ross Publishing)
- Wysocki, Robert K. and Steve Tendon, (under contract for late 2015 publication). *Patterns in the Effective Project Management Framework: A Journey Towards a Hyper-productive End State*, (Plantation, FL: J. Ross Publishing)
- Tendon, Steve, (2015). *Hyper-Productive Knowledge Work Performance: The TameFlow Approach and Its Application to Scrum and Kanban*, (Plantation, FL: J. Ross Publishing)

Supplemental References

- Coplien, James O. and Neil B. Harrison, 2005 *Organizational Patterns of Agile Software Development*, Prentice Hall
- Beedle, Mike, et al, 2000. *SCRUM: An extension pattern language for hyperproductive software development*, <http://www.jeffsutherland.org/scrum/scrum.plop.pdf>
- Brown, William J., et al, 2000. *AntiPatterns in Project Management*, John Wiley
- Coplien, James O, and Neil B. Harrison, 2005, *Organizational Patterns of Agile Software Development*, Pearson Prentice Hall
- Manns, Mary Lynn and Lynn Rising, 2004, *Fearless Change: Patterns for Introducing New Ideas*, Addison Wesley.
- Naruse, Miyuko, et al, 2008, *Project Patterns: A Pattern Language for Promoting Projects*, Faculty of Policy Management, Keio University

Risk Management

Course Description

This course is under development. Complexity and uncertainty are prevalent in every complex project. Risk of complex project failure has traditionally been high. To be successful every complex project team must continually pay attention to identified and unexpected risks through the project life span. That implies having a member of the Development Team responsible for all aspects of risk management. That responsibility includes continuous monitoring and assessment of the "risk triggers."

Pre-requisite(s)

- Advanced Effective Complex Project Management

Major Topics

- Definition of risk and the risk management process
- Risk and the project team
- Risk Identification
- Risk Assessment
- Risk Mitigation
- Risk Monitoring

Assigned Materials

Hopkin, Paul, 2014, *Fundamentals of Risk Management: Understanding, Evaluating and Implementing Effective Risk Management*, Kogan Page.

Supplemental References

Business Process Management

Course Description

Business Process Management (BPM) focuses on modeling, managing and optimizing business processes. In order to do this the disciplines of systems design and development, business analysis and project management must integrate into a single discipline. In effect this creates a process-centric layer that can effectively respond to changing business needs. In this advanced course you will learn several approaches to business modeling and process management.

Pre-requisite(s)

- Introduction to Business Analysis
- Introduction to Information Systems Management

Major Topics

- Enterprise-level view of business process management
- Linking business processes to strategic plans
- Analyzing and scoping a business process problem
- Modeling the “As Is” and “To Be” business process
- Business process modeling and management tools
- Establishing quantitative performance measures
- Validating and analyzing a business process
- Business process improvement projects and portfolios
- Implementing business process change

Assigned Materials

- Franz, Peter and Mathias Kirchmer, (2013). Value-Driven Business Process Management: The Value Switch for Lasting Competitive Advantage. (New York, NY: McGraw-Hill)

Supplemental References

- Harmon, Paul, (2007). Business Process Change: A Guide for Business Managers and BPM and Six Sigma Professionals, Second Edition. (Boston, MA: Elsevier, ISBN 978-0-12-374152-3)

Business Systems Engineering

Course Description

This course is under development. It will discuss Agile Adaptive Business Systems Analysis but from a technical perspective. This is new because it is viewed through the lens of the ECPM Framework.

Pre-requisite(s)

- Introduction to Business Analysis
- Introduction to Information Systems Management
- Advanced Effective Complex Project Management
- Business Process Management

Major Topics

- Definition of Business Systems Engineering (BSE)
- Aligning BSE to the ECPM Framework
- ECPM Process design and improvement
- etc.

Assigned Materials

Initially these will be handouts that are working drafts of articles that will eventually be published as a print or e-book.

Supplemental References

Enterprise-Level Project Management Seminar

Course Description

This is the capstone course in the MSEPM Curriculum from the perspective of the tactical and strategic formation role of project management. It examines the organization from strategic, tactical and operational perspectives using a model that covers strategic planning, enterprise architecture, business analysis, information technology, business process management, portfolio management and project management. The purpose of the course is to help the student gain a perspective and understanding of how projects, especially complex projects, interact proactively with and contribute to the business of the enterprise. It is the curriculum response to the call for action from the IBM CEO Report.

Pre-requisite(s)

- Program/Portfolio Management
- Business Process Management

Major Topics

- The Enterprise Project Management Model (EPMM)
- Who are the Participants in the EPMM?
- The fundamentals, process and structure of strategic planning
- What is the Strategic Alignment Model (Objectives, Strategies, Tactics)?
- SWOT Analysis as input to the strategic planning process
- How the strategic plan influences the organization
- Analyzing the alignment of the business to the strategic plan
- Adjusting the IT plan to support the strategic plan
- Identifying opportunities to design, develop and improve business processes
- Establishing a project portfolio management process to support the strategic plan
- Proposing and managing projects to maximize their business value
- COLLECT, ANALYZE, SELECT, INITIATE, EXECUTE and DEPLOY Phases

Assigned Materials

- Wysocki, Robert K., (2011). *Executive's Guide to Project Management: Organizational Processes and Practices for Supporting Complex Projects*, (New York, NY: John Wiley & Sons Publishers)
- Wysocki, Robert K., (2014). *Effective Project Management: Traditional, Agile, Extreme, 7th Edition*, Chapter 18: A Practical Project-Based Model of the Enterprise, (New York, NY: John Wiley & Sons Publishers)

Supplemental References

- handouts

Capstone Team Project/Thesis

Course Description

This 6 credit course begins during the semester following completion of the 3 Introductory level courses and ends in the last semester of the program. In keeping with the project-driven learning model an application focused project drives the course. The capstone course is a unifying experience for the adult learner. It gives them an opportunity to apply course content to practical applications through the team project or individual thesis. Both approaches are practice-oriented.

There are two different approaches for the Capstone Course. Both require some application of the course materials to a real problem from an employer. It could be one of the team member's employers or any other business. Because of the length of the capstone course a project could be done from start to finish. That would be ideal.

➤ **Team Approach**

This is a project-based effort. In keeping with the team-based learning model it is a team project. It is carried out under the guidance of a faculty advisor. Ideally all of the team members share a common interest or are employees of the same company. The team remains intact through the completion of their program. The project must be a real application of the Program at a Tactical or Strategic level. It is chosen by the team and approved by their faculty advisor. The project provides the motivation for learning and application. The project drives the learning and the team exercises deal with some aspect of the project.

➤ **Individual Approach**

This is the thesis effort. It is research-based and defends or refutes a position taken by the student. It is carried out under the guidance of a faculty advisor. A typical project would discuss their current employer business processes and practices as compared to the MSEPM course content.

Thesis TOC

- Acknowledgements
- I. Thesis Abstract
- II. Introduction
- III. Literature Review
- IV. Research Process & Methodology
- V. Results
- VI. Analysis, Discussion, Conclusions and Future Directions
- VII. Appendix
- VIII. References

Suggested Topics

These are very general areas of study. They are offered as suggestions not limitations. They are all related to the curriculum however. That is a requirement. The student is expected to take a point of view or position and then defend or refute it using published literature and other inputs. They should raw on materials covered in their courses. Surveys are acceptable. In addition to published research statistical analyses can support conclusions.

1. PRINCE2 LEAN
2. Requirements Elicitation
3. Requirements Breakdown Structure
4. Probative Swim Lanes
5. Co-Manager Model
6. Complex Project Team Structure
7. Meaningful Client Involvement
8. Bundled Change Management
9. Risk Management
10. ECPM Framework
11. Continuous Process Improvement
12. Blended Training/Consulting Workshop
13. Emertxe Project Management
14. Changing PMLC Models in mid-Project
15. Program/Portfolio Management
16. Project Reviews
17. The Role of the Executive
18. PMO Models
19. CMMI Maturity Model
20. Team Building
21. Leadership
22. Project Manager Position Family
23. Career & Professional Development Program
24. Training Curriculum
25. Matrix organizations

Pre-requisite(s)

- Introduction to Effective Complex Project Management
- Introduction to Business Analysis
- Introduction to Information Systems Management

Assigned Materials

There are no assigned materials.

Supplemental References

Appendix A

Program Learning Model

The design of this curriculum is based on a learning model that is unique for the following reasons:

- Aligned with Adult Learning Theories
- Project-driven
- Team-based
- Practice-oriented

To the extent possible the Learning Model mimics the real world of projects. The Program described herein meets the above. Few, if any, graduate level PM Programs make that claim.

Aligned with Adult Learning Theories

The Program is consistent with established adult learning theory and designed around the six principles of adult learning defined by Malcolm Knowles (2011, *The Adult Learner, 7th Edition*, Taylor & Francis). The adult learner is different than the traditional student:

- Adults are internally motivated and self-directed
- Adults bring life experiences and knowledge to learning experiences
- Adults are goal oriented
- Adults are relevancy oriented
- Adults are practical
- Adult learners like to be respected

Knowles expressed his concept of andragogy as follows:

- 1) Adults need to know why they should learn something before they are ready to learn. They need to see the learning in a meaningful context and understand how it will be helpful to them.
- 2) Adults have a need to be dealt with as self-directed learners. They resist being dealt with as children and being told what they need to learn.
- 3) Adult learners bring many diverse experiences with them. They can provide their own, rich source of learning. They also bring assumptions and biases that may make them resist new ideas.
- 4) Adult learners must be ready to learn. That readiness to learn comes from an understanding of how the learning will help them in the real world.
- 5) The adult orientation to learning is life-centered. They are motivated to learn to the extent that they see the learning will help them perform tasks or solve problems.
- 6) Adult learners respond to some external motivations. These include promotions, better jobs, and more money. Many, though not all, are motivated by the intrinsic need to keep growing and developing.

The Program is designed along these six principles and is supported by a model developed by David Colb (1984, *Experiential Learning: Experience as the source of learning and development*, New Jersey: Prentice-Hall) that describes how adults learn. In reporting his research findings David Colb defined four adult learning styles. He further noted that every person displays a learning profile that consists of all four learning styles but with varying

degrees of importance. Some learning styles will be preferred over others and will be used quite often while other learning styles may have a very low preference and are seldom used. Furthermore, people do not always prefer the same learning style. Their learning style profile changes with the subject matter and learning environment. The four learning styles are:

Concrete Experience

- Learning from specific experiences
- Relating to people
- Being sensitive to feelings and people

Reflective Observation

- Carefully observing before making judgments
- Viewing issues from different perspectives
- Looking for the meaning of things

Abstract Conceptualization

- Logically analyzing ideas
- Planning systematically
- Acting on an intellectual understanding of a situation

Active Experimentation

- Showing ability to get things done
- Taking risks
- Influencing people and events through action

These learning styles are pervasive throughout the proposed curriculum. We can translate these styles into appropriate learning modules or learning approaches as shown in the table below. The table illustrates how the Colb model applies to an individual who wants to learn to swim.

Table 1: Example of the Colb Learning Styles Model

Learning Style	Learning to Swim	Teaching Tools
Concrete Experience	I'd like to get in the pool and have someone next to me in case I need help	Case study Role playing
Reflective Observation	I just would like to sit at the side of the pool and watch people swim	Case Study Example
Abstract Conceptualization	I'd like to read a book or listen to a lecture on the movement of solids in a liquid medium.	Lecture Discussion
Active Experimentation	Just throw me into the pool and I'll figure it out on the way down.	Individual exercise Team exercise

Learning Styles Inventory

The Learning Styles Inventory (LSI) developed by David Colb consists of 12 questions to help you evaluate the way in which you prefer to learn. The answers create your personal profile along the four learning styles.

Project-driven Learning Model

**Projects/problems precede the learning rather than the reverse.
Projects/problems motivate the adult to learn a concept and then apply it.**

The projects are real to the extent that they come from the business environments of the students. Students submit brief descriptions of projects from their company. Current real projects are brought into the classroom. From the student's experience these projects present significant learning opportunities. These projects then undergo a rigorous evaluation by the instructor and the class before being accepted into the course as case studies to support the learning objectives. The projects might already be complete or not yet approved for execution by the company managers. Classes include exercises derived from these real world case study projects. Several different projects might be undertaken by the class. Each team works independently of all other teams even if they are working on the same project.

Team-based Learning Model

We work in teams so isn't it appropriate that we should learn in teams.

That makes the team a source of learning through its member experiences. In addition to learning project management processes and practices in this environment team members will learn how to work in teams and handle the many challenges that arise in the team environment. All exercises are team efforts and include discussion, issues resolution and presentation of team deliverables which are then discussed and critiqued by the class. The model works best if every team works on the same project but independent of one another. That creates opportunities to compare different approaches that a team might take to the team exercises. Each team can work on its own project. These case study projects are in depth studies of real world situations that explore all aspects of decision making at the tactical and strategic levels of the enterprise. There is no comparable graduate program in project management.

Practice-oriented Learning Model

The Program is grounded in practice-based team exercises but is theoretically sound. This exploits the project-based and team-based structure of the curriculum. It also gives the learning experience the added benefit of seeing the challenges and issues of project management in practice.

**Having the opportunity to practice what was just learned is a
major contributor to adult learning.**

To date graduate level PM programs have been constrained by the overarching dominance of the PMI PMBOK and the PMP certification. The PMP is a knowledge-based certification. It is not a competency-based certification which is where the unmet need exists. Competency is an elusive goal but its achievement is not yet backed up by a curriculum that leads to that competency. That is among the objectives of the proposed Program described below.

The projects are real to the extent that they come from the business environments of the students. Students submit brief descriptions of the projects which then undergo a rigorous evaluation by the instructor and the class before being accepted into the course as case studies to support the learning objectives. The projects might already be complete or not yet approved for execution by the company managers. Classes include exercises derived from these real world case study projects. Several different projects might be undertaken by the class. Each team works independently of all other teams even if they are working on the same project.

That makes the team a source of learning through its member experiences. In addition to learning project management processes and practices in this environment team members will learn how to work in teams and handle the many challenges that arise in the team environment. All exercises are team efforts and include discussion, issues resolution and presentation of team deliverables which are then discussed and critiqued by the class. The model works best if every team works on the same project but independent of one another. That creates opportunities to compare different approaches that a team might take to the team exercises. Each team can work on its own project. These case study projects are in depth studies of real world situations that explore all aspects of decision making at the tactical and strategic levels of the enterprise. There is no comparable graduate program in project management.

Appendix B

Learning Styles Inventory

The Learning Styles Inventory (LSI) developed by David Kolb consists of 12 questions that are designed to help you evaluate the way in which you prefer to learn. See Appendix A for a description of the LSI. While you may already know that you prefer to experiment with something new rather than to have someone lecture you on its use, the LSI will help you understand exactly how you learn and what you can do to improve your learning abilities. Each question asks you to rank your preferences for four different choices in several different learning situations. For example, one of the questions asks the following:

I learn best when: ___ I rely on my feelings
 ___ I rely on my observations
 ___ I rely on my ideas
 ___ I can try things out for myself

You rank the four choices from the one that is most like you (rank 4) to the one that is least like you (rank 1). The inventory is self-administered and self-scored. Following an algorithm that is explained in the inventory the rankings are tabulated and presented in four learning preferences as follows:

- **Abstract conceptualization.** This style of learning is best thought of as learning by thinking. The individual analyzes ideas and data and draws conclusions based on his or her intellectual understanding of the situation.
- **Active experimentation.** This style of learning is best thought of as learning by doing. The individual simply goes ahead and does things. These individuals are risk takers, results oriented, and influencers of others through their taking action.
- **Concrete experience.** This style of learning is best thought of as learning by experience. The individual draws conclusions from the experiences he or she has had with these situations. These individuals typically do this in a collegial environment by relating to the feelings and practices of others.
- **Reflective observation.** This style of learning is best thought of as learning by watching. The individual observes others practicing the situation and draws out meaning after careful reflection.

Each of the 12 questions has four responses, and each response maps to one of these four dimensions. The scoring key that accompanies the LSI shows you how to map your rankings on each answer to each of the four dimensions. In effect, you are adding up the rankings for all of the responses that map to a specific dimension. The resulting scores are mapped to the diagram shown in the figures that follow. The higher the sum of the rankings on a dimension, the more that dimension is your preferred learning style; that is reflected by an extended portion of the “kite” in that dimension. The kite conveys a lot of information about the individual. The larger the penetration of the kite into a particular quadrant, the more the individual prefers that style. This will become clearer as we examine some of the more typical learning styles in Figures 1 through 4.

Individual Learning Style Types

The four learning preferences (abstract conceptualization, active experimentation, concrete experience, and reflective observation) map into four learning style types as follows:

- **Assimilating** A combination of reflective observation and abstract conceptualization.
- **Diverging** A combination of concrete experience and reflective observation.
- **Accommodating** A combination of active experimentation and concrete experience.
- **Converging** A combination of abstract conceptualization and active experimentation.

Let's take a closer look at each of these learning styles.

The assimilating learning style is characterized by high scores in the reflective observation and abstract conceptualization learning preferences. Figure 1 shows two examples of typical results from individuals who strongly favor abstract conceptualization and active experimentation over concrete experience and reflective observation. These individuals prefer the *assimilating style*. Assimilators are people who excel at collecting and representing data in crisp and logical form. They are focused on ideas and concepts rather than people. These individuals like to put data and information together into models that explain the situation from a larger perspective. As a result, they are more interested in something making sense logically than they are in any practical value. They are not results-oriented people. These types of individuals are generally found in the more technical or specialist careers, such as project managers.

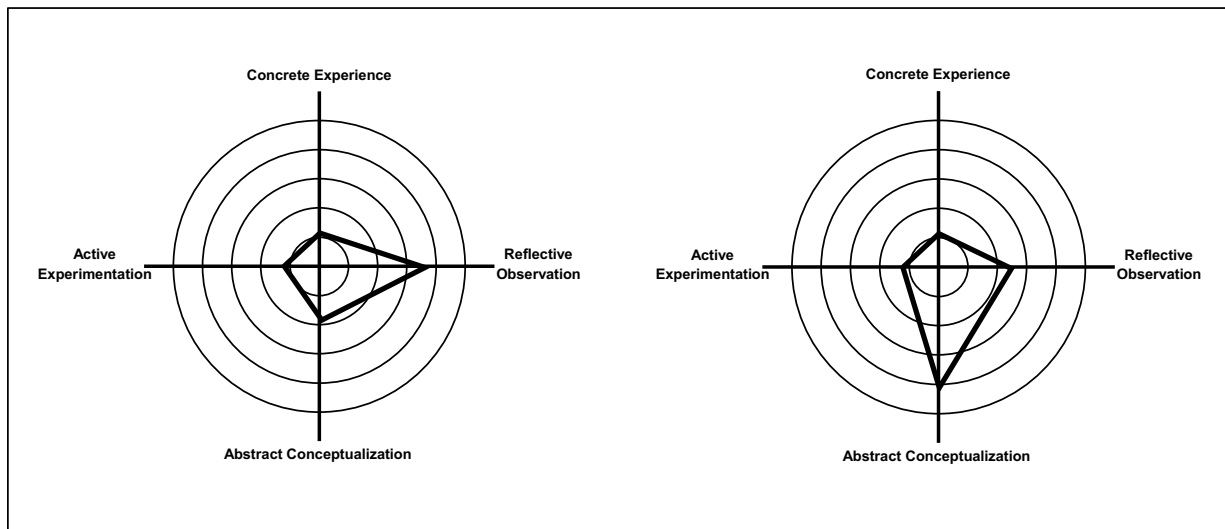


Figure 1: Examples of the Assimilating Learning Style

The diverging learning style is characterized by high scores in the concrete experience and reflective observation learning preferences. Figure 2 shows two examples of typical results from individuals who favor concrete experience and reflective observation. These individuals prefer the *diverging style*. Individuals who are characterized by these kites like to look at alternatives

and view the situation from a variety of perspectives. They would rather observe than take action. Divergers like brainstorming and generally have a broad range of interests and like to gather information. On a project team these people will often suggest outside-the-box thinking and offer suggestions for other approaches than those that may have already been identified.

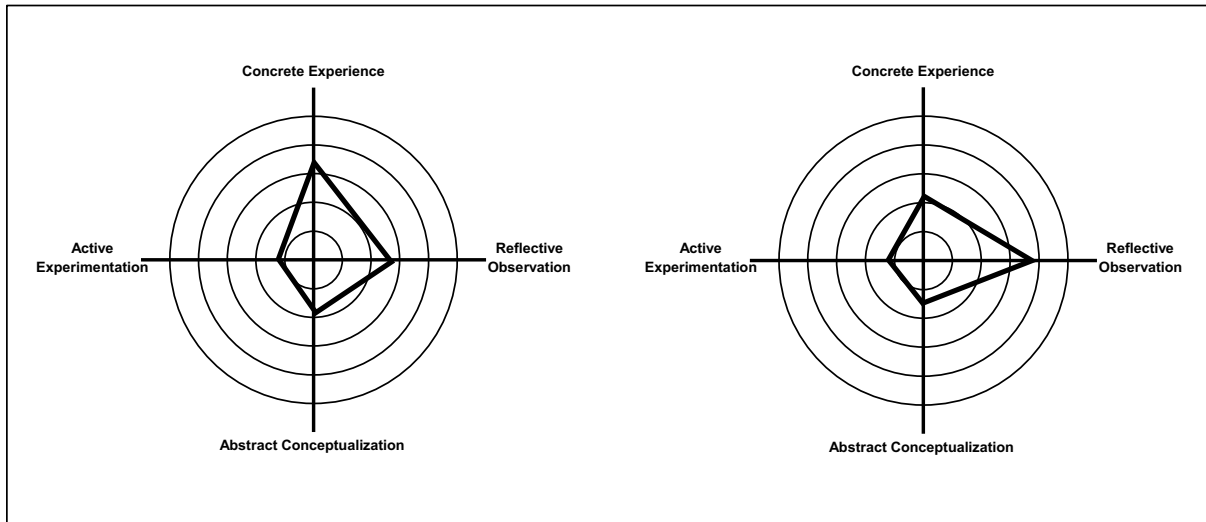


Figure 2: Examples of the diverging learning style.

The accommodating learning style is characterized by high scores in the active experimentation and concrete experience learning preferences. Figure 3 shows two examples of typical results from individuals who favor active experimentation and concrete experience. These individuals prefer the *accommodating style*. Individuals who are characterized by this kite are results oriented and want to put things into practice. They are adaptive and can easily change with the circumstances. Accommodators are people persons. They are strong at implementation and hands-on activities and are good team players. They tend to be action oriented and more spontaneous than logical. As problem solvers they rely on people for input rather than on any technical analysis. On the project team you can count on these people to help foster a strong sense of teamwork, and they will often be found facilitating the working together of team members. They will often be the peacekeepers as well.

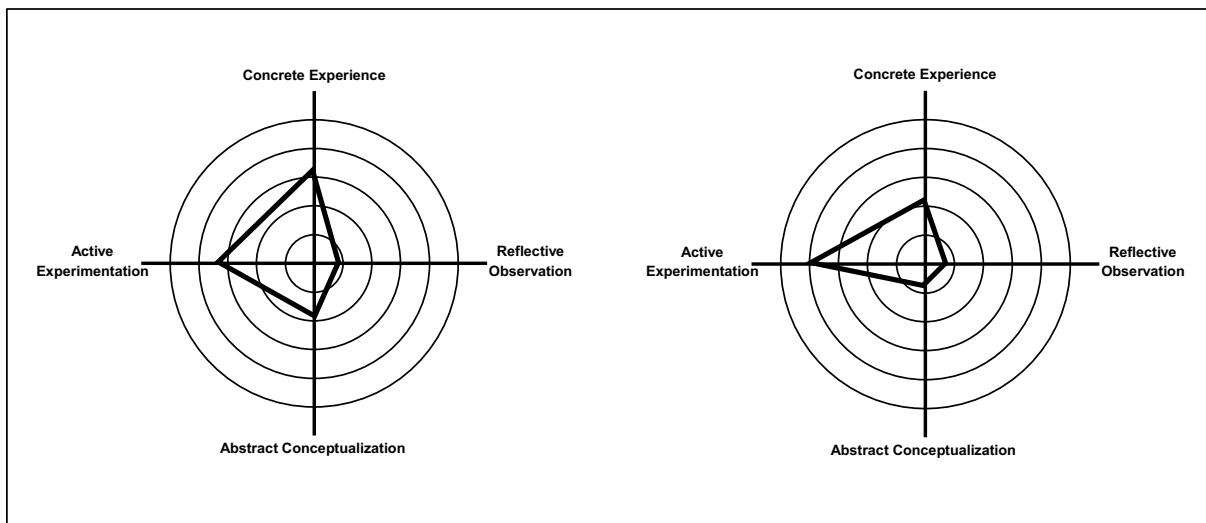


Figure 3: Examples of the accommodating learning style.

The converging learning style is characterized by high scores in the abstract conceptualization and active experimentation learning preferences. Figure 4 shows two examples of individuals who favor abstract conceptualization and active experimentation. These individuals prefer the *converging style*. Individuals who are characterized by this kite like to assemble information in order to solve problems. They like to converge to the correct solution. Convergers are the solution finders but not the solution implementers. Their strength lies in their ability to take concepts, models, and ideas and turn them into practical use. They are not particularly people oriented and would rather work with technical tasks and problems. They are good at picking the best option among a number of alternatives. On the project team these will be the results-oriented members. They will drive the team into action by helping it focus on which approach to a situation is best and then mobilizing the team into action.

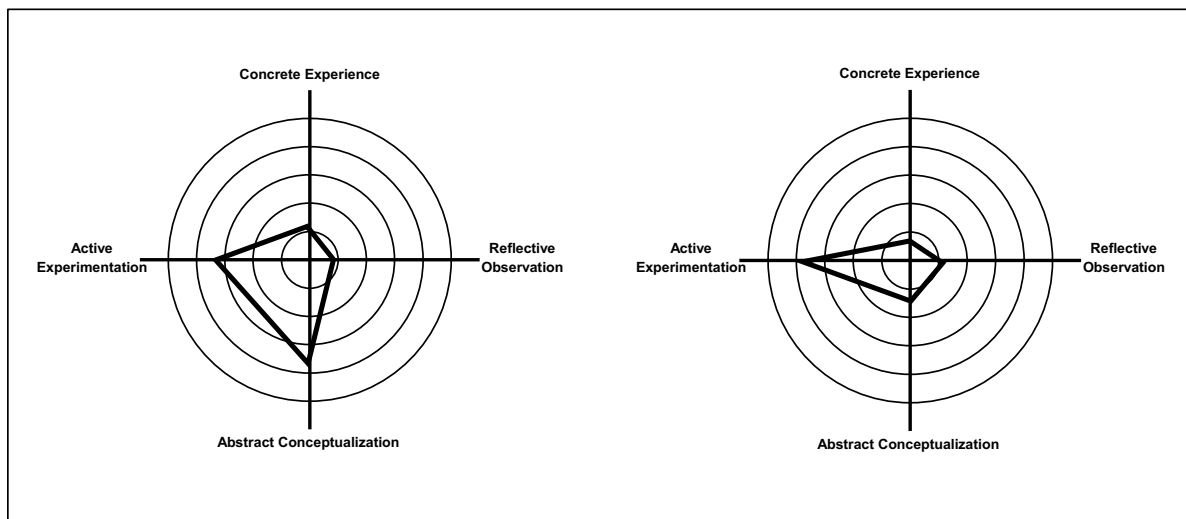


Figure 4: Examples of the converging learning style.

It is possible for an individual's LSI to reveal similar scores in each quadrant. When graphed, the kite that these scores form penetrates all four quadrants equally. This individual is considered balanced, and the kite indicates that the person is comfortable with and practices all four learning preferences. Because of this balance and ability to relate to all learning preferences, he or she will be a stabilizing force on the project team and will function very well in a coordinating role across the team. A balanced style is the exception however.

Once you determine the preferred learning styles of your students, you are better prepared to choose among alternative learning formats and delivery systems.

To be maximally effective every learning module should contain at least one learning moment for every learning style.

The MBA-PM Curriculum design follows these guidelines. However, not all delivery systems facilitate all four styles.