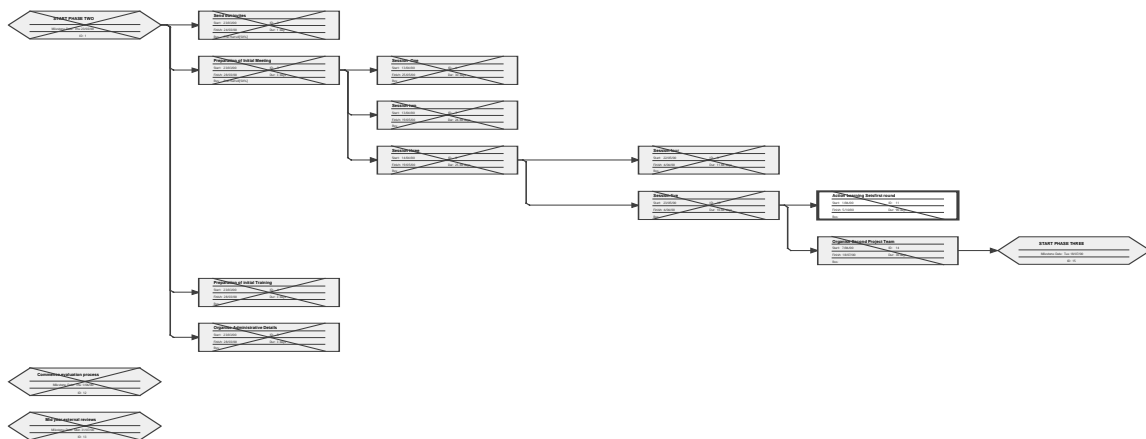


Project Management for Success in Teaching and Learning Projects

An Integrated Project Management Workbook



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Contents

Section	Page
Section One Introduction to the Program.....	4
1.1 Introduction	4
1.2 An Overview of the Enhancing Project Management Program Conducted at UNE....	5
1.3 How to Use the Workbook	6
1.4 Program Structure and Objectives	7
Section Two Learning Module A: The Nature of Project Management	8
2.1 Module A: Objectives	8
2.2 Content of the Manual	8
2.3 Why Project Management?	8
2.4 Understanding Project Management	9
2.5 The Real World of Project Planning	13
2.6 The Project Life Cycle	17
2.7 The Project Manager in Teaching and Learning Projects	21
2.8 Module Summary	22
Section Three Learning Module B: Focusing on the Outcome	23
3.1 Module B: Objectives	23
3.2 Content of Module	23
3.3 The Importance of Clarifying the Project Purpose	23
3.4 Risk and Uncertainty in Project Management	36
3.5 Practical Conduct of the Project Definition	41
3.6 Module Summary	42
Section Four Learning Module C: Planning for Project Success	43
4.1 Module C: Objectives	43
4.2 Content of the Module	43
4.3 Planning the Project	43
4.4 Developing a Project Schedule	45
4.5 Accurate Estimation of Project and Task Duration	56
4.6 Module Summary	58

Section	Page
Section Five Learning Module D: Conducting and Reviewing the Project	59
5.1 Module D: Objectives	59
5.2 Content of Module	59
5.3 Overview	59
5.4 Set-up	61
5.5 Monitoring	62
5.6 Control	63
5.7 Your Project Management Information System	64
5.8 Productive Meetings	65
5.9 The Review Phase	69
5.10 Why Projects Succeed	69
5.11 Module Summary	70
Section Six Learning Module E: Enhancing the Project	71
6.1 Module E: Objectives	71
6.2 Content of Module	71
6.3 Overview	71
6.4 The Project Manager and Leadership	72
6.5 The Nature of Project Teams	78
6.6 Important Communications Questions	84
6.7 Case Studies	86
6.8 Putting It All Together	89
Section Seven Planning Sheets and Forms	91
Project Definition	92
Risk Management Analysis	97
The Six Rules of Brainstorming	99
Work Breakdown Sheet	100
Resource Allocation Worksheet	101
Gantt Planning Sheet	102
A Meeting Checklist	103
Meeting Conduct Sheet	104
Meeting Agenda	105
Meeting Agenda – Email Format	106
Hints for Effective Meeting Minutes	107
DETYA Project Report Format	108
Team Communication Plan	109
Section 8 References and Websites	
8.1 Other Areas of Information	110
8.2 Websites	111
8.3 Journals	112
8.4 Useful Project Management Organisations	112
8.5 Useful Project Management User Groups and Resources	113
8.6 Usefule Project Management Software Downloads	113
8.7 Bibliography	114

Section One

Introduction to the Program

1.1 Introduction

The information contained in this workbook is the result of lessons learned from the ‘Enhancing Project Management Skills for Teaching Development Projects’ program, which was conducted at the University of New England (UNE) throughout 2000. The program, funded by CUTSD, aimed to improve the quality of project management in teaching and learning projects at UNE as well as provide a model for project management in teaching and learning projects that can be applied at Universities throughout Australia. It involved the conduct of a one-year, action learning based, project management staff development program. This workbook is based on the outcomes of that action learning program.

This workbook assumes little understanding of project management principles but does presume that the reader is familiar with the academic environment. The workbook is a self-paced learning resource that allows the reader to progress at his or her own pace through the various project management modules. Alternatively, with an experienced facilitator, the essentials of this workbook can be taught as a one-day workshop.

This workbook is designed for people who already have an actual project that is to be conducted and are looking for skills and techniques in relationship to the management of the project. It presumes the application for moneys and grants has already been conducted. This workbook is **not** designed to teach people ‘how to write a grant application’. It should be noted that a good project plan could be a useful place to begin when applying for a grant however, most people produce a plan once the money has been acquired.

The workbook is divided into eight sections. Section One, ‘Introduction to the Program’ explains the background to the ‘Enhancing Project Management Skills for Teaching Development Project’ program and provides a brief overview of how the project was conducted at UNE. An explanation is then given on the most effective way to use these resources. Sections Two through Six provide a workshop on Project Management as it relates to teaching and learning projects in the academic environment. Section Seven provides a number of project management planning sheets. Section Eight details links to project management sites and lists references.



If you are keen to roll up your sleeves and get into it, you may wish skip the background to the UNE project and go straight to the Section 1.3 how to use the workbook.

1.2 An Overview of the Enhancing Project Management Program Conducted at UNE

A need was identified at UNE for the development of project management skills amongst higher education staff. Action learning was chosen as a method for developing project management expertise because it is a contextually specific, experience based approach to management development. It offered the promise of a learning framework that would enable project management principles to be effectively embedded into the unique University organisational setting.

There are many 'schools' of action learning. However, action learning literature is essentially linked by the premise that in the learning process there must be a relationship between reflection on knowledge and action based on that reflection. Action learning involves groups of individuals (termed sets) working together to solve problems. Learning happens because participants in a set have an opportunity to reflect on their experience with support from others and then convert the learning to action (McGill and Beaty 1992; Mumford 1997). In other words, action learning involves, learning from experience, sharing an experience with others, critical evaluation of that experience, and then implementation and review of the experience (Mailick *et. al.* 1998, p52).

As previously stated, the Enhancing Project Management program was a one-year, Action Learning based, project management staff development program. The program commenced in February 2000 and concluded at the end of December 2000. The program manager (appointed in February 2000 for the life of the project) initially conducted a project needs analysis and from this, the structure of the action learning program developed. He identified from interviews with academic and general staff at UNE that the majority of project problem issues (that have already been highlighted above) could be addressed through providing academic and general staff with a number of fundamental project management techniques and skills. However, these techniques and skills would only be effective if they were embedded into workplace practice. This required not only skills development but also culture change. Therefore a combination of workshops and action learning set groups were employed.

Twenty academic and general staff members were involved in the program throughout 2000. At the commencement of the program, participants were provided with course materials and undertook a number of project management skills development workshops (each of two hours duration). The workshops covered the project management life-cycle as well as a range of project management skills including: project scoping, definition and planning, project control, risk assessment, rational estimation techniques and the use of MS-Project planning software. The workshops were a prerequisite for the action learning sets that followed. This ensured all participants were equipped with a baseline skill level necessary to effectively manage projects.

There were three Action Learning Set Groups formed. The Set Group makeup was chosen by the participants and was generally based on non-specific issues such as timetabling and availability. In some cases Educational Designers and Academics working on the same project ensured they were in the same Set Group. The Set Groups met every three weeks for a minimum of two hours. Issues addressed in the set groups included: the nature of conflict, University politics, time management, communication problems, the nature of influence, and dealing with difficult people. The program concluded in December 2000 with an integration workshop focusing on Project Leadership, followed by each Set Group presenting what they had learned to the larger group.

The 'Enhancing Project Management' program provided many positive outcomes and is considered a success which has been verified by external evaluation. The basis for this workbook are the lessons that were learnt from the action learning program along with the knowledge and skills that are required for effective project management of teaching and learning projects.

1.3 How to Use the Workbook

Overview

This is a self-paced project management course. You can expect to work through the material in eight to sixteen hours of study. It is a cumulative process, so in general, you will benefit most from progressing through the program in the order set out below. Of course, please feel free to jump between modules if you feel you have the knowledge to do so. Alternatively, with an experienced facilitator, this can be conducted as a one day, project management workshop. A set of PowerPoint slides is provided to assist facilitation. These are on the UNE, TLC Project Management Web Page.

The workshop will provide you with the skills necessary to effectively, plan and conduct a teaching and learning project. As stated above, no prior knowledge of project management is assumed. This is an introductory program. Experienced project managers may benefit from the planning sheets or simply wish to implement the planning system outlined in this program.

It is worth highlighting at this stage, that this is a workbook **NOT** a manual. In other words, whilst it contains enough information for you to learn about project management and how to plan and conduct a project, it does not cover all aspects of the project management discipline. This is because we want you **to actually use the workbook**. Therefore, we have kept it as compact as possible. If you are interested in more detail than is provided here you may wish to download the Project Management Body of Knowledge (PMBOK) from <http://www.pmi.org> or refer to the reference list.

Workbook Conventions

The workbook includes a number of learning activities or exercises designed to consolidate your learning. Many of the learning activities will also be preceded by questions aimed at making you think about a particular aspect of project management. You will get most benefit from this workbook if you attempt all questions and learning activities. In some exercises you will be asked to work on generic projects which are designed to reinforce your learning and at other times you will be given the opportunity to work through your own projects. You will learn more effectively by following the instructions and working through all activities. The following symbols are used throughout this workbook.



Exercise or activity.



Questions for you to answer.



Important information

A Word on Generalisability

This manual specifically targets those people involved in the management of teaching and learning projects. However, the principles of project management espoused here are equally applicable across a range of different project types. This workbook will help you manage any project whether it be large or small, simple or complex, within a university or a commercial environment.

1.4 Program Structure and Objectives

Diagram 1.4.1 illustrates a suggested structure for the program. Each module builds on knowledge gained from the previous one.

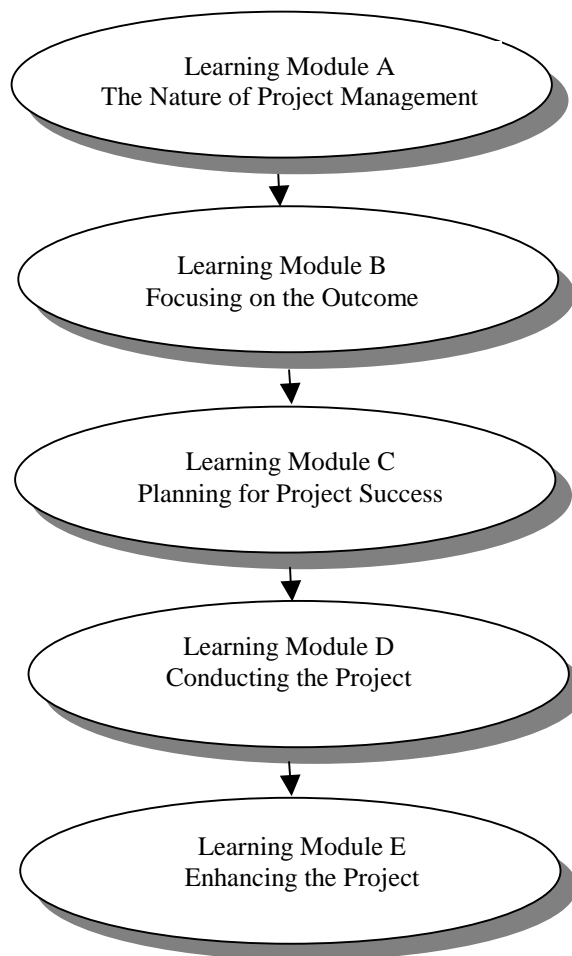
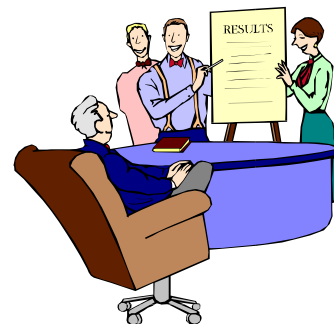


Diagram 1.4.1: Structure of Program



Section Two

Learning Module A: The Nature Of Project Management

2.1 Module A: Objectives

At the conclusion of this module you will be able to:

- Use the self-paced learning materials and explain the sequence of teaching.
- Explain the principles and practices of the discipline of project management as they relate to teaching and learning projects.
- List and explain individual project management issues and problems.

2.2 Content of Module

This module introduces you to the concept of project management and provides an overview of the project management life cycle. You will look at a definition of project management, consider why project management is important and look at the factors affecting the management of projects.

2.3 Why Project Management?

There is a need for effective project management. The teaching and learning environment of today is becoming far more reliant on a project based, team approach. For example, a relatively straightforward teaching initiative, such as placing a course on line, would most likely require input from academic staff, web designers, technical staff and instructional designers. More complex multimedia projects often require an even greater range of people and resources as well as a lengthy development period. This complex project environment requires appropriate project management skills. Projects need to be carefully planned, input from different staff needs to be co-ordinated, time-lines monitored, budgets managed and outcomes evaluated. Effective project management ensures cost effective use of valuable resources such as people and funds.

The university is a unique environment. The skill set required for effective project management is not necessarily the same set necessary for academic success. Many academic staff who are required to manage teaching and learning projects are often not equipped with the project management skills necessary to carry out successful project management. Hayden and Speedy (1995) in their evaluation of the 1993 CAUT Teaching Development Grants highlighted project planning and management issues among the impediments to successful project outcomes. These findings were further supported by the work of Alexander and McKenzie (1998) who identified poor planning and inadequate project management as factors contributing to the failure of teaching development projects.

The focus of those involved in teaching development projects is usually on the tangible product or outcomes of the project and not on the less tangible processes required to ensure the project is managed effectively. Project management is often seen as an unnecessary add-on or something which will happen automatically. Yet academic success in many instances requires project success. This workshop will assist you to develop the range of skills appropriate for effective project management in the higher education sector.

2.4 Understanding Project Management



Exercise One

Before we launch into the skills necessary to effectively manage projects it will be helpful for you to reflect on the issues and problems that you face as a project manager. This will allow you to place the learning for the program into context.

So think back to projects which you have managed or simply been involved in. Answer the following questions in the space provided. *Please note that you should only spend about 5 to 10 minutes on this exercise.*



Question 1

Briefly describe the type of projects you have been involved in.



Question 2

What were the main issues and problems which you faced during the project?



Question 3

What do you want to understand about project planning from working through this workbook? Remember as you work through the program, the clearer you understand your needs, the greater will be your focus of learning.

Problems, Problems, Problems!!!!

Some of the issues that came up at UNE included: 'lack of team-work, no clear direction, lack of co-operation, inability of project participants to meet deadlines, underestimation of project time by project managers, ambivalent commitment from stakeholders and interdepartmental rivalry'. Do you notice the similarities between the issues and problems faced by others and those you listed? As you progress through the workbook, refer back to the issues you have raised here and highlight where there are techniques and skills that will allow you address some of these issues.



Overall Workshop Aims

This workshop aims to provide you with enough knowledge to assist you to achieve project success in teaching and learning projects. You will be able to:

- explain project management terminology, procedures and techniques;
- design, develop and document project plans;
- describe the tools of project management;
- monitor and track projects to maintain control;
- develop ideas to enhance project teamwork.

So let's roll up our sleeves and get involved!!!

What is Project Management?



Firstly, what is a project? After all, if you are going to spend quite a number of hours working on how to manage it, you may as well be clear on what 'it' is. Take a few minutes to answer the question "What is a project?"

You probably wrote something down about having to achieve a certain amount of work in a certain period of time given a limited amount of resources. Essentially, a project has a start and a finish. You probably have a number of people involved in your project (although if you are conducting a project by yourself, the principles in this workbook are just as relevant to you). In teaching and learning projects these may include instructional designers, programmers, academic staff from various parts of the University and numerous others. These 'resources' often have competing commitments for your particular project. Now consider the definitions below.

“A temporary endeavour undertaken to create a unique product or service.”

(The Project Management Institute (PMI), p167)

“Projects are intended to produce certain specified results at a particular point in time”

(Archibald 1976, p19)

“A project is usually a one-time activity with a well-defined set of desired end results”

(Meredith & Mantel 2000, p99)

Teaching and learning projects are normally temporary events designed to achieve a specific outcome. This outcome might be a new unit or the placing of an existing unit on-line. Furthermore, it is becoming far less usual for teaching and the development of new teaching approaches or resources to involve a single academic working alone. On-line teaching requires input from academic staff, web designers, instructional designers and technical staff. Multimedia projects are complex in their development, often taking lengthy periods to produce and requiring a range of expertise from programmers and other technical staff as well as educational and content experts. There is a growing need for IT support staff to work collaboratively with academics and other support staff to ensure that teaching developments have adequate IT infrastructure and on-going maintenance to be effectively implemented.

The complexity of these projects require careful planning. Input from different staff needs to be co-ordinated, time-lines monitored, budgets managed and outcomes evaluated. Project management for teaching developments using IT brings the additional problem of co-ordinating input from people with very different perspectives and ways of working. Effective project management is a necessity to ensure cost effective use of resources such as people and funds.

Now consider the British Institute of Project Management definition.

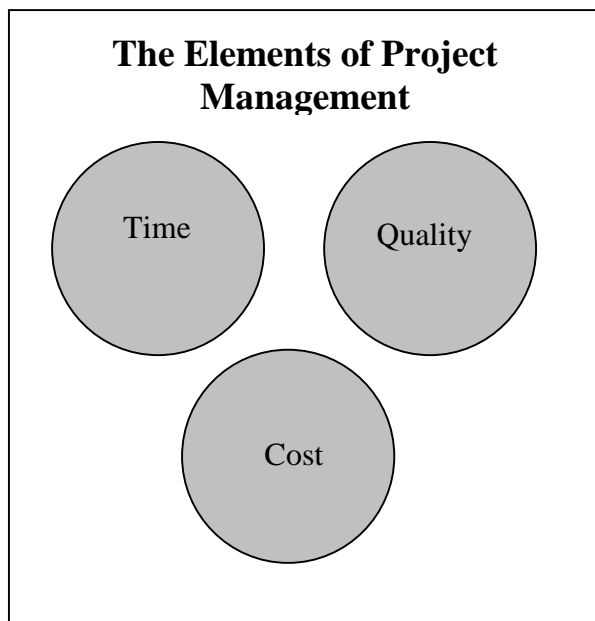
“...the overall planning, control and co-ordination of a project from inception to completion aimed at meeting the clients’ requirements and ensuring completion on time, within cost and to required quality standards.”

(The British Institute of Project Management)

The definition above is an interesting one. Is this an appropriate definition for the teaching and learning environment? How relevant is this to the academic world? Who are your clients? Is it relevant to you in your environment?



Reword the British Institute of Project Management definition to encompass the unique academic environment.



The success of a project is not only defined by the degree to which its overall objectives are met and benefits realised but also in terms of the project managers capacity to maintain control of the project. To achieve this it is normal to break down our body of work into a number of smaller jobs or tasks which must be managed to a certain level of **quality**. To get these done, we will need to assign resources, which may be people, materials, machines, equipment, vehicles, office space and any other agents that might be required. The use of these items incur **costs**. A project also has a finite **time** frame. In other words, project management is the process of balancing the demands of three major elements: quality, time and cost to achieve project goals. Now let us consider these each individually.

Quality

Quality relates to the project objectives and deliverables. This is the ‘why & what’ of the project. What is its purpose? What is being delivered and to what degree of refinement? In teaching and learning projects we would be looking at the breadth of the outcome. For example, quality could be related to the type of content on a web-based unit. Interestingly, when teaching and learning projects experience difficulty, the breadth of the outcome can be one of the first things to suffer.

Time

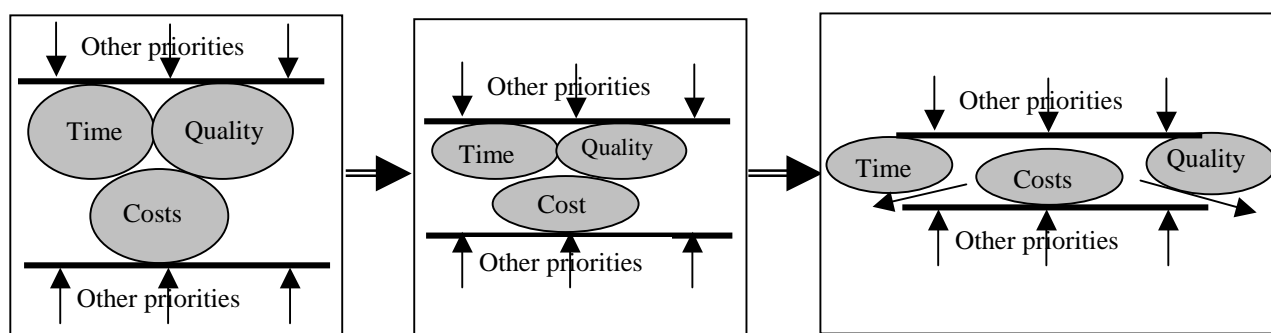
It is important to deliver the project outputs in a pre-specified and agreed-upon time. Time is often the biggest single project mistake in teaching and learning projects. This is often reflected in missed deadlines, incomplete materials and late final reports. Therefore effective control of time requires the careful identification of the tasks that will need to be performed, an accurate estimation of their likely durations, their required allocation of people and materials (resources) and the sequence in which they are going to be done. It is important to calculate a realistic estimate of the total duration for the project.

Cost

It is also important to deliver the project outputs in a pre-specified and agreed-upon budget. Obviously, in conducting teaching and learning projects you do not want to run out of money but equally you do not want to under spend either. Many government grants have a ‘use it or lose it’ approach to project money. This can mean that if the budget has not been well planned money can be wasted in a last minute scramble to spend the allocation of funds. So, having identified the resources that will be required for the work, be they materials or human resources, it is important to calculate the expected cost of each to the project.

2.5 The Real World of Project Planning

Of course, in the real world of project management, it is never as simple as it appears in texts. In reality, many other priorities impact on the management of our projects. What is required is a system that is flexible enough to allow us to maintain control of our projects even during times of difficulty. Consider the diagrams below. As we progress through the project other priorities impact and squeeze us. If they keep squeezing then something has to give. What normally gives in teaching and learning projects that you have been involved?



It is our observation that with teaching and learning projects the easiest thing to ‘give’ in such projects is often quality. ‘Let’s not produce that really innovative interactive software with all those graphics...Let’s just throw some words down and call it a day’. Often it is very easy to reduce the output of the course that you want to produce. Quality is often the first thing to ‘give’. The other aspect to ‘give’ is time. People don’t make the deadline or they do make the deadline but at quite a significant cost. In other words the project team is not leaving work at 5 pm, they are leaving late at night so that they can make the deadline.

You can gauge your performance during a project often by the degree you are in control when other priorities interfere. The degree to which deadlines and budgets are being met is an appropriate indicator of your progress. Faced with pressures of agendas, politics, changing priorities, scarcity of resources and money, a project manager is nonetheless required to meet commitments.

Project management is in many ways a process to avoid surprises caused by the dynamic, fluid nature of the real world. If they cannot be eliminated, then they at least need to be minimised. As a project manager you should expect surprises. These come in the form of missed deadlines, people off sick, software not performing as expected, miscommunication and changed priorities of the department or stakeholders, to name just a few.

The immediate nature of projects mean that it is not always possible to have a dress rehearsal (although in some projects, particularly with new technology, including a trial is an important component). The next best option is to model the likely flow so that problems can be anticipated and avoided. This is all a project plan is – a representation of the project on paper or on a computer screen, that allows you to get a sense of what is likely to happen in reality. Much of the work that will occupy us during this workshop is aimed at developing project models or plans so that the impact of unexpected events can be mitigated.



Exercise Two

The following exercise is designed to highlight the principles, skills, tool and techniques of project management. Read the following project management brief, produce a project plan and then answer the questions below.

Project Management Brief:

You have been tasked with managing an important teaching and learning project. You are to produce a generic unit that can be used in a distance education program, which will be developed across three faculties. The project will involve the production of interactive training material including a CD ROM. A travelling promotional tour will follow the production of the CD ROM. It is now the middle of Semester 2 and you are required to have the materials ready for Semester 1 next year.

In your project team, you have an academic representative from each faculty and an instructional designer. Your job is to manage this group of highly motivated academics and to get the project completed on time and on budget. You have done some research and you have discussed the project with your head of department, the person who has given you the job. You have also spoken to a colleague who has undertaken a similar project in the past. From these discussions, you have identified some information, which is listed below.

There are some fundamental philosophical disagreements regarding the content of what different team members believe should be in the unit materials.

The materials must be developed in consultation with the three faculties.

The materials are to consist of a Unit Guide (text and diagrams), readings, CD ROMS and on-line support.

The materials must be given to the DTP section who will convert the material to your university's style.

One academic will be absent on study leave during the second half of Semester 2.

You are asked to briefly define and plan your project and develop a project plan. In your plan, identify the problems you envisage and how you intend to deal with them. What costs would you need to consider? How can you keep track of resources?

The aim of this exercise is to identify ways that we can manage and keep control of the project. You should not dwell on the detail. Simply think about the mechanisms which you are going to use to keep control of your project. You should consider the following questions:

- How are you going to make sure that you do not go over time?
- How are you going to ensure that at any point in time, you are aware of how the project is progressing?
- How are you going to ensure that you have an effective planning system?
- How are you going to keep your people motivated?
- What communication plan do you have in your project?

Produce a useable project plan either here or on the page opposite and then answer the questions on the next page.

There are numerous tasks that you could brainstorm for this project. Here are six broad tasks that may give you some form to start with.

Task 1: Review information - you estimate two months.

Task 2: Production of initial draft of material - you estimate another two months.

Task 3: Production of final draft of materials - two months.

Task 4: Distribute draft for comments - one month.

Task 5: Produce final policy - one month

Task 6: Disseminate materials.





a. What is the outcome of the project and how will you know when it is completed?



b. What tasks have you identified that need doing?



c. How will you keep control of the project to ensure you complete on time?



d. What other factors are important when conducting the project?

When this activity has been conducted as part of a workshop, the following issues are usually raised in the subsequent discussion.

- **The importance of meetings.** Hold an establishment meeting of the management team. During the meeting, the project would be defined as well as its goals, parameters, aims and objectives, stages, deliverables, outcomes, research parameters. Establish regular meeting times.
- **The importance of consultation.** Consult with stakeholders. Refine parameters of the project if necessary after the consultation and input by the stakeholders.
- **Understand the outcome that is required.** Conduct a needs analysis and identify clients, people, resources and tools. Consider the people who are part of the project and their roles and responsibilities. Consider the project management tools available and select those which are appropriate. Consider the constraints – time and money.
- **Communication is important.** Identify methods of communicating. Identify procedures for dealing with disagreements. Develop a communications plan.
- **Plan effectively and efficiently.** Apply the project management tools to the practical planning of the project to enable the project to proceed from its initiation to its completion. Establish long and short term goals. Allocate tasks. Establish control mechanisms and a monitoring process (that is, quality assurance) for the project to check the efficiency (that is, how the project is proceeding?) and the effectiveness (is the project achieving?) and establish whether there is a gap between where the project is and where it should be. If there is a gap, establish methods to get the project back on track. The monitoring process will track the project. Develop a process to redefine goals as a result of unexpected problems such as finance, people etc.



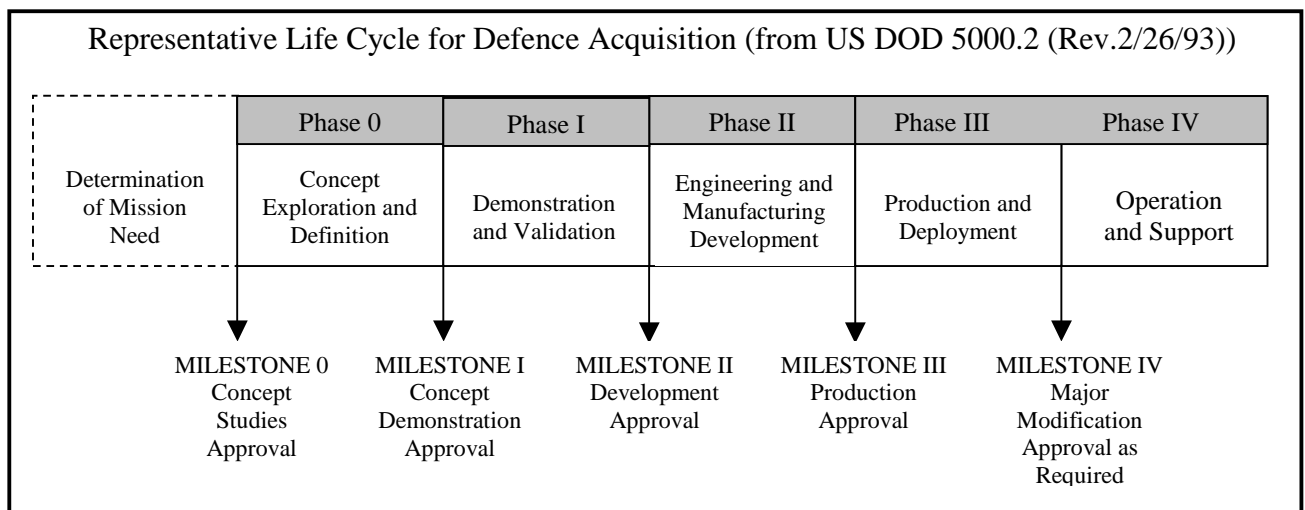
Real-world projects are plagued with complexity, volume and uncertainty. We therefore need to develop a project management methodology which will help us manage this complexity. The methodology selected must combine the best of analytical techniques and include proper documentation, particularly, for very large projects. The project management methodology must be a streamlined and effective process and should recommend a functional yet easy-to-use software package.

2.6 The Project Life Cycle

Because of the complex nature of a project, it is usual to divide the events of a project into several phases which make up the life cycle of the project. A project normally has a finite life cycle; it has a commencement, a conduct or implementation and a conclusion marked by the completion of one or more deliverables. The specific names of the phases differ depending on which book or model is being used. However, they all include some way of clarifying the outcome of the project, producing a comprehensive useable plan, conducting the project, and reviewing it after its completion.

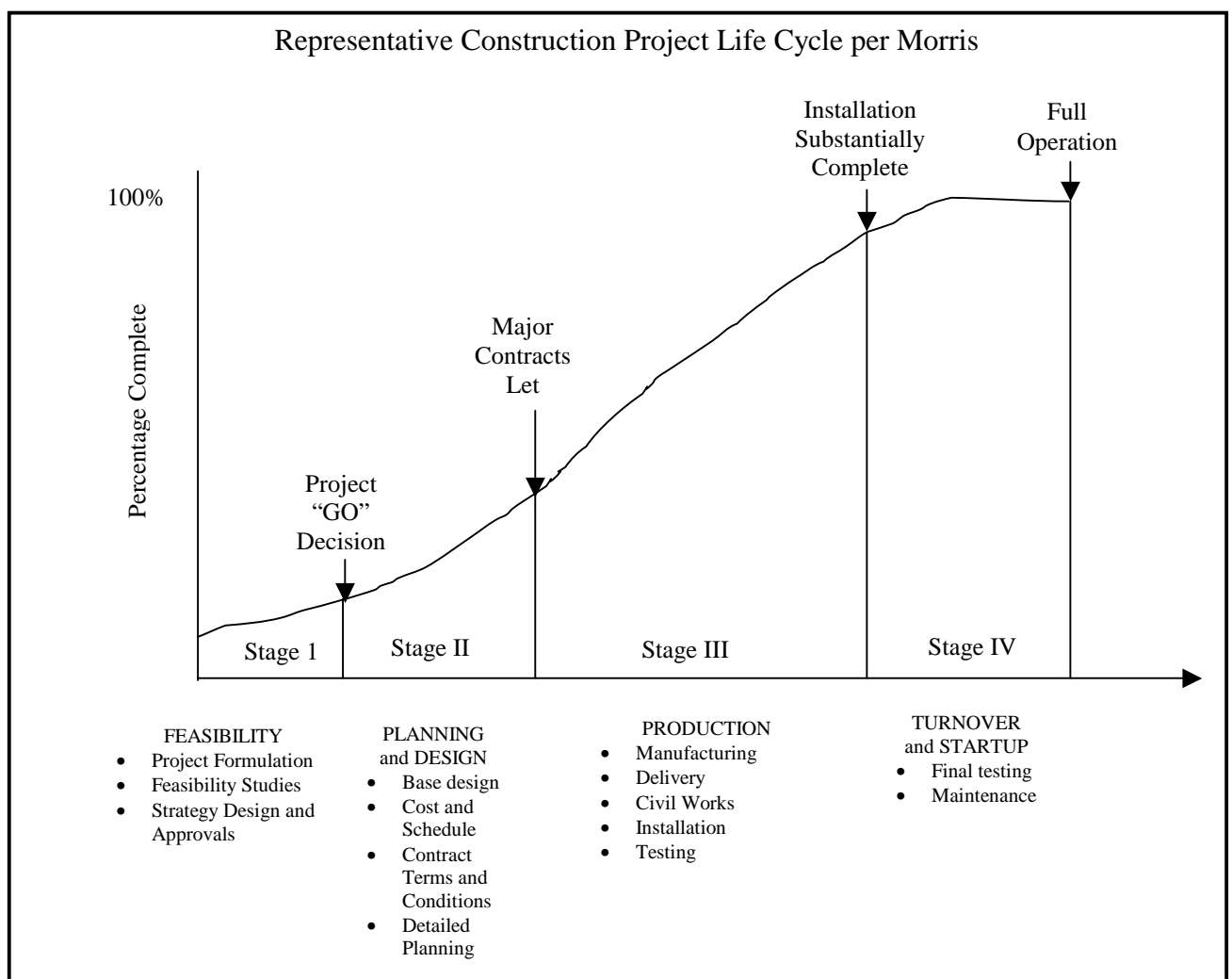
Consider some examples of typical project life cycles and phase names listed on the following page. These have been selected to demonstrate the different approaches which may be taken.

The Defence Acquisition project life cycle is used by the US Department of Defence and includes a series of acquisition milestones and phases.



(taken from page 13, PMBOK.)

The construction project life cycle describes a model used for the building of a facility and includes a series of stages and outcomes.



(taken from 14, PMBOK)

Different types of projects may require different phases. For instance, a marketing project involving the identification and development of a new product, will often commence with a feasibility study and conclude with a product launch. We have tried to follow the KIS (Keep it Simple) principle when defining a life cycle for teaching and learning projects. We have divided such projects into four broad phases. These are Definition, Planning, Conduct and Review.

Project Definition

This phase has one simple purpose - Clarity of Purpose. How well a project has been defined will in turn determine how well the project is then set up for planning. It is our experience that many problems in teaching and learning projects stem from inadequate project definition. Once a project is to proceed then the clarity of objective is vital. As is the assessment of risks, project constraints, feasibility etc. This process is sometimes called project scoping. A project definition should be detailed enough to answer the question - **Do I have a project?**

Project Planning

This is the detailed phase of breaking down the project into 'bite size chunks'. It involves analysing what work needs to be done, who will be required to do it and the amount of time necessary and the costs required to complete the project. It is also vitally important that the project is well documented. This allows for greater control during the conduct of the project as well as an easier report writing and review phase. As we discuss further on, we encourage you to use project planning software to assist in the planning process. The question to ask at the end of this phase is - **Do I have a detailed enough plan to maintain control of the project?**

Project Conduct

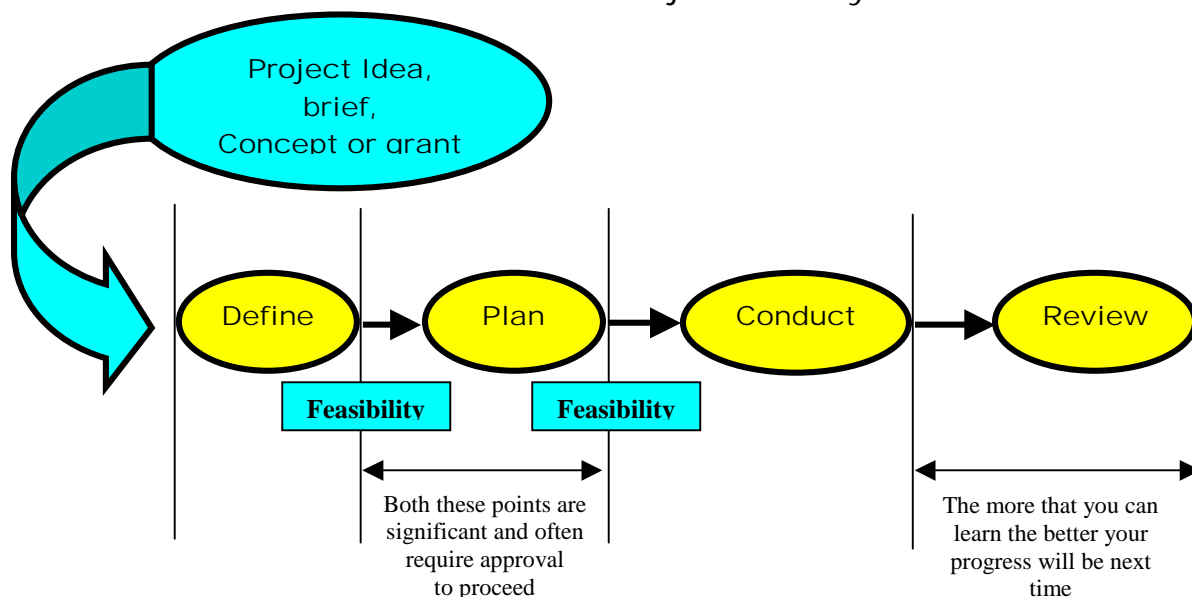
You need to conduct your project in accordance with your project plan. You must measure the 'plan' *versus* the 'actual'. You need to know what is actually happening with your project versus what you thought was going to happen. Whilst it is important to minimise variance, it is more important to be in control. This may require adjustments and corrective action. The question to ask during this phase is – **Am I in control?**

Review

The review of the project involves an in depth analysis of the project normally at its conclusion. This is an opportunity to examine all the project issues and learn from mistakes that have been made. If the project has been well documented then this phase is relatively straight forward. The question to ask at the end of this phase is - **What can I learn?**

These phases are shown in the diagram below.

The Project Life Cycle

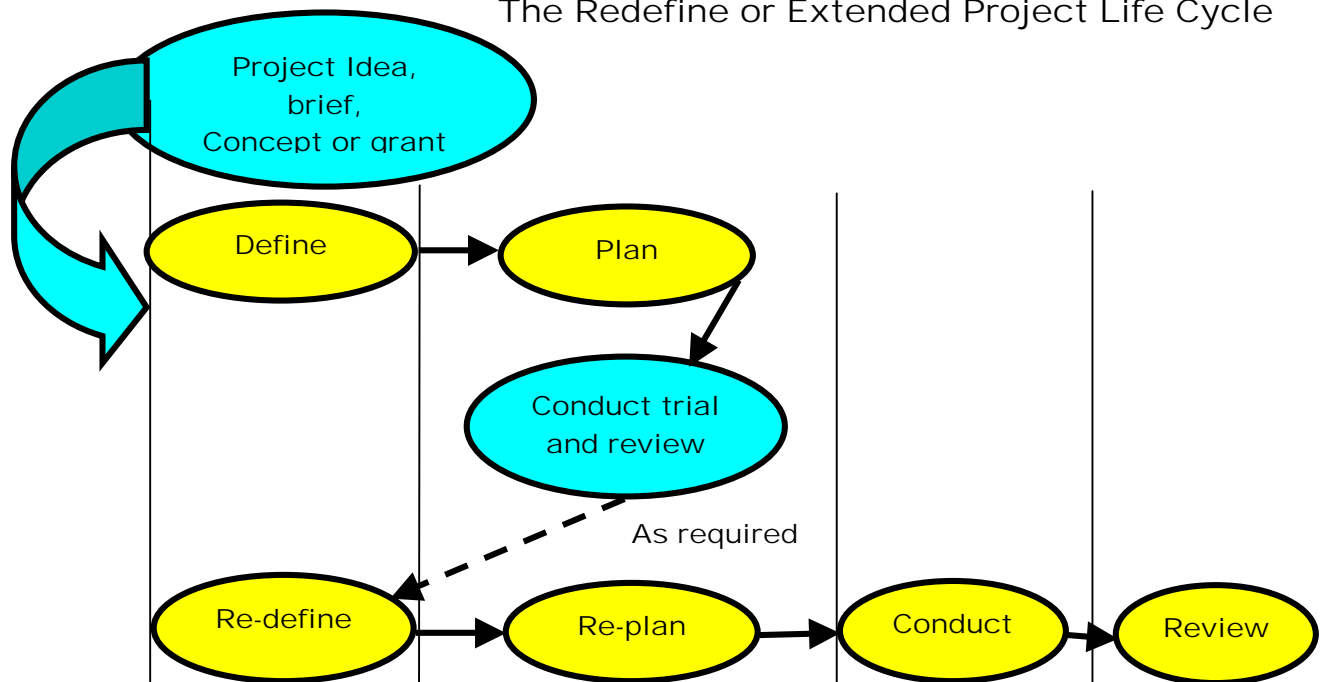


It is worth highlighting that this model is a simple model designed to assist in the management of teaching and learning projects. In the real world of project planning you may need to:

- define and plan;
- conduct a trial to assess development time; and then
- redefine and plan.

The redefine or extended model is particularly useful when dealing with technology such as developing CD-ROMS as it allows for trial and error and ultimately should lead to more reliable project plans. Use this model as a guide to develop your project so that it suits your needs.

The Redefine or Extended Project Life Cycle



2.7 The Project Manager in Teaching and Learning Projects

Up until now we have talked about ‘costs’, ‘resources’ and ‘phases’ and mentioned little about the people in a project. The key to project success is to have an effective planning system coupled with solid people skills. It has been our experience that at least 50% of issues and problems in projects could be avoided by effective management of people. The way people are managed is crucial to project success. This will be dealt with in some detail in Learning Module E.

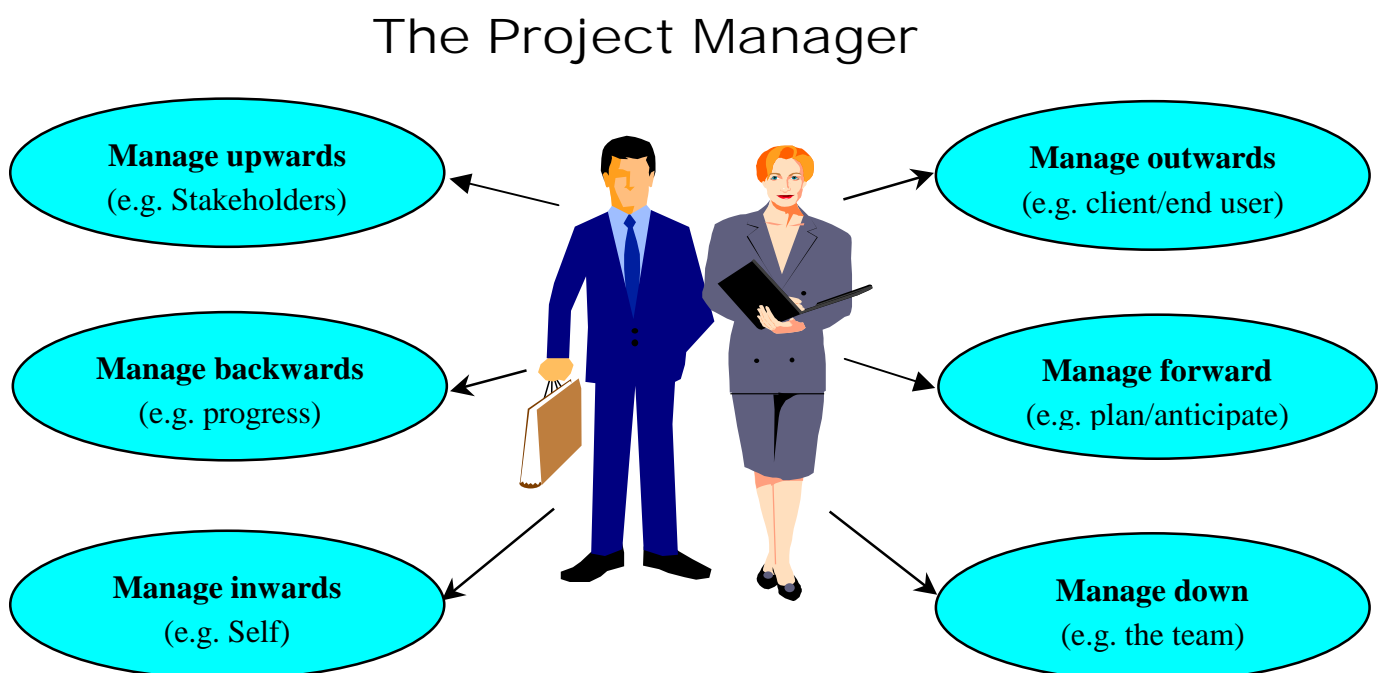
It is worth remembering that a humble project manager has many responsibilities. The leader of a project team is certainly responsible for effectively leading his or her team through the four stages of project management. However, to really understand the role of the project leader we need to extend the definition of project management to include ‘*managing the visible and invisible team to achieve the objectives of the stakeholders.*’ Underlying this definition are five concepts that we must recognise:

- The **visible team** - these are the people who work directly on the project.
- The **invisible team** - the people who contribute indirectly, marginally or have an interest in an aspect of the project.
- The **stakeholder** - the significant people who have an interest in the project outcome.

The project leader in addition to taking these potentially conflicting interest groups into account must also consider:

- The **organisational context** - there are many factors that impact on the leader’s decision making that are not central to completing the task. These include numerous vested interests, organisational politics and strategic significance.
- The **people factor** - as many fiascos are caused by inadequate people management as by insufficient technical skills.

The project leader, to be effective, must be able to balance many, often competing issues. These issues are represented in the diagram below.



Hints for the Project Manager

Being a project manager and managing a project can be a very daunting task. Most project managers are thrown into the tasks without any prior training. Meredith and Mantel (2000, p 28) posed the question “What information were you never given as a novice project manager that, in retrospect, could have made you job easier?” to dozens of project managers over several years. They came up with a list of 12 rules which they call the “Vital Dozen for Project Managers” which they suggest that project managers need to keep in mind while they are progressing through the project cycle.

Vital Dozen for Project Managers	
1.	Understand the content of project management.
2.	Recognise project team conflict as progress.
3.	Understand who the stakeholders are and what they want.
4.	Accept and use the political nature of organisations.
5.	Lead from the front.
6.	Understand what “success” means.
7.	Build and maintain a cohesive team.
8.	Enthusiasm and despair are both infectious.
9.	One look forward is worth two looks back.
10.	Remember what you are trying to do.
11.	Use time carefully or it will use you.
12.	Above all , plan, plan, plan.

(taken from Meredith and Mantel 2000)

2.8 Module Summary

- Project management is the overall planning, control and co-ordination of a project from inception to completion aimed at meeting the clients’ requirements and ensuring completion on time, within cost and to required quality standards.
- Project management is the process of balancing the demands of three major elements: quality, time and cost to achieve project goals.
- The project Life Cycle can be broken into four broad phases; Definition, Planning, Conduct and Review.
- Project managers need to manage the people who work directly on the project, those who contribute indirectly, marginally or have an interest in an aspect of the project to achieve the objectives, to significant people who have an interest in the project outcome.
- The Project Manager must be able to balance many, often competing issues.