

Unit 4: Project Planning Using IT

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| Unit code: | A/601/3259 |
| QCF Level 2: | BTEC Specialist |
| Credit value: | 10 |
| Guided learning hours: | 60 |

Aim and purpose

The aim of this unit is to introduce learners to the fundamental concepts of project planning using IT tools and to enable them to plan, implement, and review a project in a real-world scenario.

Unit introduction

It is common to read or hear about large-scale projects that over-run their deadline dates or cost very much more than it was thought at the start and this is often because of poor project planning.

In this unit learners will be expected to apply project planning skills to an individual project that produces a product or service. The skills and knowledge developed in this unit can apply equally to non-IT or IT-based projects.

The first part of the unit looks at the activities involved in carrying out a project from the initial request and gathering of information to implementation and review. The factors influencing projects such as the finance or resources available are also considered.

Planning projects is vitally important and learners will focus on the production of a project plan that will be used throughout the project. Working within agreed timescales and allocated resources is vital and this is reflected within the assessment of this unit. However, internal or external circumstances can result in plans needing to change and tracking the progress of the work and keeping other people informed of progress is essential.

The final part of the unit involves reviewing the product or service that has been developed.

The choice of the project is entirely open. It can be based on existing skills or skills and knowledge developed in other IT units such as website development or database development, or it can be based on work for other subjects or an extra-curricula event.

Learning outcomes and assessment criteria

In order to pass this unit, the evidence that the learner presents for assessment needs to demonstrate that they can meet all the learning outcomes for the unit. The assessment criteria determine the standard required to achieve the unit.

On completion of this unit a learner should:

| Learning outcomes | Assessment criteria |
|--|--|
| 1 Know how to prepare for a project | 1.1 identify the factors that influence projects 1.2 describe the activities which compromise the project life cycle 1.3 gather information required for a project 1.4 outline the scope of an intended project |
| 2 Be able to produce a project plan | 2.1 produce an outline project plan |
| 3 Be able to follow a project plan to implement a project | 3.1 monitor the progress of a project against the project plan, making adjustments as necessary |
| 4 Be able to review a project to ensure it meets its goals | 4.1 review a project against a project plan |

Unit content

1 Know how to prepare for a project

Factors that influence projects: internal factors eg time, money, expertise, urgency, resources, likely benefits, constraints; external factors eg finance, holidays, work placements, expertise, legislation

Unsuccessful projects: reasons eg unrealistic expectations, poor initial project design, additional unforeseen developments

Gathering information: appropriate techniques eg questionnaires, observation, interviews, market research

Project life cycle: activities eg outline proposal, alternative proposals, gather information, produce project plans, gain permission, design a solution, produce a solution, monitor progress, test, review, user acceptance, maintenance

Scoping: requirements eg purpose of project, why a solution is needed, who is it for, timescale, resources needed, constraints

2 Be able to produce a project plan

Why plan?: reasons eg setting timescales to meet deadlines, factoring in known constraints (holidays etc), making sure resources are available at the right time, costing the project accurately

Project plan: ordered lists of activities; timescales; milestones; resources eg staffing, money, hardware, software

Produce a plan: using software eg dedicated project management software, spreadsheet

3 Be able to follow a project plan to implement a project

Monitor progress: methods eg work logs, update reports, interim testing; interim reviews; adjustments eg milestones, handover date

4 Be able to review a project to ensure it meets its goals

Review: aspects of the planning eg appropriateness of project plan, timescales, use of resources; the product eg meets the requirement, impact on users, usability, functionality, hit or miss

Essential guidance for tutors

Delivery

For learning outcome 1, case studies of existing projects or presentations by people who have recently completed projects can be used to make learners aware of the various factors that influence projects, what can go wrong and what stages the project went through.

A practical approach is recommended to reinforce the learning of the underpinning project planning skills. The assessment does not require an IT-based project and a simple non-IT related example could be used. One example might be to consider a project to organise an end-of-year party. In this example, learners would first have to find out what was needed, eg style of music, food, times, etc. This gives opportunities for interviewing or generating questionnaires to gather learner feedback. Planning considerations might involve booking the venue and DJ etc, ordering the food, fund raising, checking health and safety issues etc. Various potential other solutions could also be considered (alternative venue and dates, volunteer 'police' etc).

To create a project plan learners can be introduced to any suitable project management software or simply use a spreadsheet. It is not a requirement at this level to use specialised software. The important thing is that learners are able to organise the project activities into a sensible order, put realistic timescales on each activity and identify the resources needed.

Monitoring progress is hard to do in theory and therefore any opportunities that arise to practice keeping logs and setting milestones should be identified. This could be applied to learners' assignment schedules from any units they are studying.

Reviewing is a skill that has to be practiced. Learners find it hard to go beyond stating that something was OK or not. The indicative content can provide headings for what should be reviewed and providing supplementary questions using 'why' and 'how' can help learners amplify their responses.

Outline learning plan

The outline learning plan has been included in this unit as guidance and can be used in conjunction with the programme of suggested assignments. The outline learning plan demonstrates one way in planning the delivery and assessment of this unit.

| Topic and suggested assignments/activities and/assessment |
|---|
| Introduction to the unit |
| <p>Preparing for a project:</p> <ul style="list-style-type: none"> • whole-class exercise – tutor presentation on factors which influence projects and why projects go wrong • whole-class exercise – tutor presentation on the project life cycle • individual exercise – learners gather information and produce project proposals for tutor-set scenarios. |
| Assignment 1 - Groundwork |
| <p>Planning a project:</p> <ul style="list-style-type: none"> • whole-class exercise – tutor presentation on planning, activities, timescales, resource management, software • individual exercise – learners gather information and use software to produce project plans for tutor-set scenarios. |
| Assignment 2 - Planning |
| <p>Following a project plan:</p> <ul style="list-style-type: none"> • whole-class exercise – tutor presentation on monitoring methods • individual exercise – learners apply monitoring methods to a suitable project/part of a project. |
| Assignment 3 - Implementing |
| <p>Reviewing a project:</p> <ul style="list-style-type: none"> • whole-class exercise – tutor presentation on reviewing projects • individual exercise – learners review a suitable project/part of a project. |
| Assignment 4 - Evaluating |

Assessment

It is suggested that this unit is assessed using four assignments as summarised in the *Programme of suggested assignments* table.

Learners themselves do not need to identify the topic for the project. It is recommended that some element of choice will allow learners to engage with the topic and thus achieve to the highest level of their ability. Evidence for the unit may be produced via one or more assignments, and although ideally one project would be undertaken, each criterion could be met individually from different projects occurring naturally within the context of other unit study, at work or work placement, or in simulated activities. This strategy may be particularly relevant where criterion cannot be met easily in a single project.

It is essential that projects are completed individually by learners. Group projects, where project tasks are divided amongst group members, are not acceptable evidence for this unit.

Practical activities must be accompanied by observation records or witness statements, but this should not be the only form of evidence for an individual criterion. Guidance on the use of observation records and witness statements is provided on the Edexcel website.

1.1 and 1.2 could be evidenced via an introductory task, undertaken before project topics are identified, and covering the factors listed in the unit content under learning outcome 1. Alternatively, as for the suggested assignment, 1.1, 1.2 and 4.1 can be completed at the end of the project.

Criteria 1.3–4.1 naturally follow the steps involved in undertaking a single project, ie the establishment of project requirements, gathering information, the production of a project plan, completing the project with associated monitoring, followed by a review of activities undertaken and the impact of implementation.

All criteria could be evidenced by a project portfolio or report. If this form of evidence is chosen, it should contain appropriate sections relating to individual criteria, such as an introduction (to cover 1.3 and 1.4 ie identifying particular requirements and the gathering of information), a project planning section (using the planning techniques associated with 2.1, which may be produced using appropriate models, spreadsheets, flowcharts, project management software), project activities (3.1 – to include notes, observation records, photographic evidence etc as appropriate to the topic selected), a monitoring section (3.1 – could take the form of an annotated project plan, diary, work log) and a review section (4.1 – to include review of the project plan). This strategy should enable tutors to assess achievement against individual criteria accurately, whilst allowing learners to provide a variety of forms of evidence. It may be appropriate at some stages for reviews to be undertaken via oral or visual presentation and any slides or notes produced included in the portfolio or as an appendix to the report.

Programme of suggested assignments

The table below shows a programme of suggested assignments that cover the assessment criteria in the assessment and grading grid. This is for guidance and it is recommended that centres either write their own assignments or adapt any Edexcel assignments to meet local needs and resources.

| Criteria covered | Assignment title | Scenario | Assessment method |
|------------------|------------------|---|---|
| 1.3, 1.4 | Groundwork | Investigate the requirement and develop some ideas. | Research information. Project proposal. |
| 2.1 | Planning | Produce a project plan for a given timescale. | Project planning documents. |
| 3.1 | Implementing | Carry out the project according to plan, monitoring progress and adapting plans as required. | Evidence of project completion. Records of monitoring. Annotated plans. |
| 1.1, 1.2, 4.1 | Evaluating | Describe the project life cycle and the factors that influence projects and review the completed project. | Short report. |

Links to National Occupational Standards, other BTEC units, other BTEC qualifications and other relevant units and qualifications

This unit forms part of the BTEC in IT sector suite. This unit has particular links with:

| Level 1 | Level 2 | Level 3 |
|---------|---------|--------------------------|
| | | Project Planning with IT |

This unit maps to some of the underpinning knowledge from the following areas of competence in the Level 2 National Occupational Standards for IT (ProCom):

6.1 Information Management.

Essential resources

Learners will need access to hardware and software appropriate to the projects undertaken.

Employer engagement and vocational contexts

The use of vocational context is essential in the delivery and assessment of this unit.

Learners will require access to computer equipment to enable them to gain a practical awareness and enable them to apply their knowledge and understanding in a practical situation.

There is a range of organisations that may be able help centres to engage and involve local employers in the delivery of this unit, for example:

- Learning and Skills Network – www.vocationallearning.org.uk
- Local, regional business links – www.businesslink.gov.uk
- National Education and Business Partnership Network – www.nebpn.org
- Network for Science, Technology, Engineering and Maths Network Ambassadors Scheme – www.stemnet.org.uk
- Work-based learning guidance – www.aimhighersw.ac.uk/wbl.htm
- Work experience/workplace learning frameworks – Centre for Education and Industry (CEI University of Warwick) – www.warwick.ac.uk/wie/cei

Indicative reading for learners

Textbooks

Butterick R – *Project Workout: A Toolkit for Reaping the Rewards from All Your Business Projects* (FT Prentice Hall, 2005) ISBN 0273681818

Maylor H – *Project Management, Third Edition* (FT Prentice Hall, 2002) ISBN 0273655418

Dennis Lock – *Project Management* (Gower Publishing Ltd; 2007) ISBN 0566087723

Journal

Projects magazine

Project Manager Today

Websites

www.businessballs.com/project.htm

www.mindtools.com

www.projectsart.co.uk

Functional Skills - Level 2

| Skill | When learners are ... |
|---|---|
| ICT - Using ICT | |
| Plan solutions to complex tasks by analysing the necessary stages | producing an outline project plan |
| ICT - Developing, presenting and communicating information | |
| evaluate the selection, use and effectiveness of ICT tools and facilities used to present information | reviewing a project against a project plan monitoring progress against the project plan, making adjustments as necessary. |