Chapter 3 An overview of project planning

Further exercise pointers

1. List the products created by the Step Wise planning process.

This can be seen as a follow-up to Exercise 3.7 in text. The pointers for this show how the steps in the Step Wise planning process could map onto the various sections of a planning document which can be seen as the final deliverable of planning. The further exercise in effect asks the students to identify intermediate products in the process.
I find it useful to encourage students discuss *how* they are going to do an exercise – after all this is a subject to do with planning. One approach would be to go through each of the steps in the Step Wise framework, identifying the products created. You might end up with something like this.

0.Select project: feasibility report
1. Identify project scope and objectives Terms of reference
2. Identify project infrastructure Standards, procedures relating to progress reporting, change control etc
3. Analyse project characteristics Technical plan, risk register
4. Identify the products and activities Product breakdown structure, product descriptions, product flow diagrams, 'ideal' activity network
5. Estimate effort for each activity Schedule of task durations and costs
6. Identify activity risks. Updated schedule of task durations and costs, updated risk register
7. Allocate resources Gantt chart
8.Reviewpublicize plan: Publicized plan
9. Lower level planning: Detailed plans

A second approach might be to take the contents of the plan document and treat each sub-section as a product in its own right.

Discussion points might include:

- Sometimes a product could be an updated version of some existing product

- Planning in some ways is a particular type of design process – you will often have to go back and modify things you have already created.
- This leads to the need for having points when products are baselined i.e. when they can no longer be changed without a formal management process being adhered to .

2.What products must exist before the activity 'test program' can take place? What products does this activity create?

These seemingly straightforward questions can be used to get students to think about what is really involved in the testing process. The basic answer would be along the lines:

Pre-test. Software specification, testing environment, test cases (including input details and expected results), software to be tested
.
Post-test Actual results, list of discrepancies, error reports

One question that may arise is what is meant by 'program testing'. Does it include the process of error diagnosis, correction and retesting? When you are allocating time and resources to this in a project, then the answer is probably 'yes'. If so then a wider range of products could be identified e.g. corrected software, change requests, off-specification reports (when it is decided not to change the software to deal with a particular recognized fault).

3. An employee of a training organization has the task of creating case study exercises and solutions for a training course which teaches a new systems analysis and design method. The person's work plan has a three-week task 'learn new method'. A colleague suggests that this is unsatisfactory as a task as there are no concrete deliverables or products from the activity. What can be done about this?

The point of this exercise is to get participants to think about situations where there are activities which do not seem to have products. The question is based on an actual incident on a student placement: the real problem was that the student found it difficult to cope with such an unfocused task – which boiled down to reading manuals for three weeks. The solution was to get her to write up a worked example of the way the method worked using an example case study.

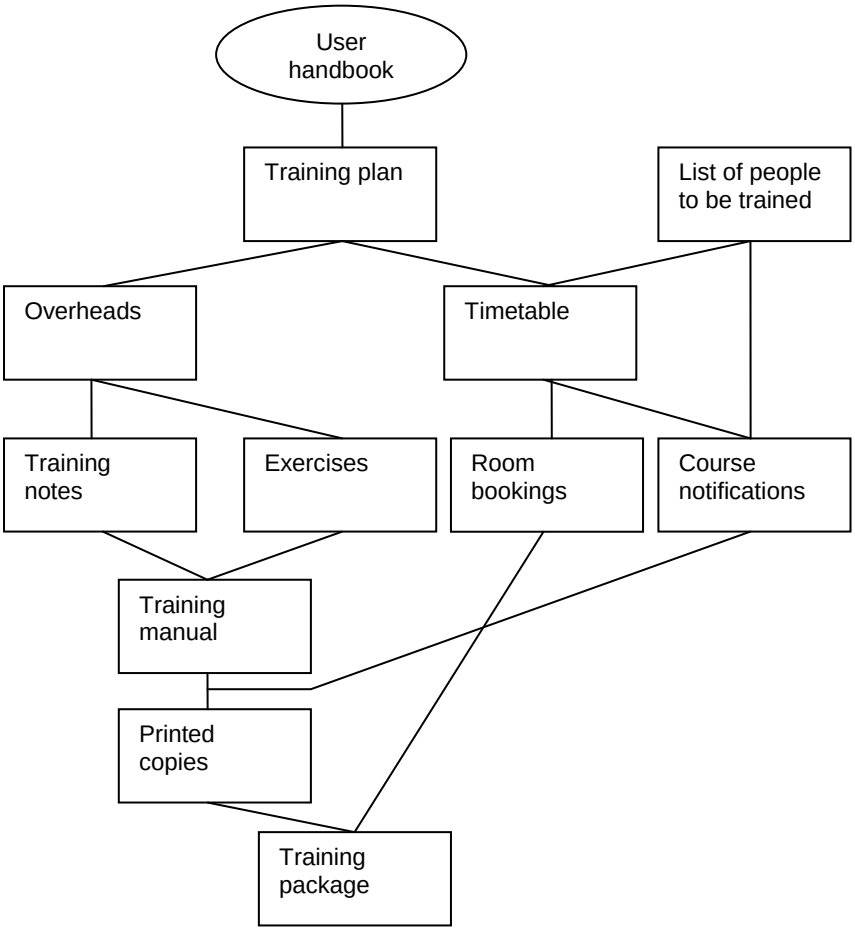
4. In order to carry out usability tests for a new word processing package, the software has to be written and debugged. User instructions have to be available describing how the package is to be used. These have to be scrutinized in order to plan and design the tests. Subjects who will use the package in the tests will need to be selected. As part of this selection process, they will have to complete a questionnaire giving details of their past experience of, and training in, typing and using word processing packages. The subjects will carry out the required tasks using the word processing package. The tasks will be timed and any problems the subjects encounter with the package will be noted. After the test, the subjects will complete another questionnaire about what they felt about the package. All the data from the tests will be analysed and a report containing recommendations for changes to the package will be drawn up.

Draw up a Product Breakdown Structure, a Product Flow Diagram and a preliminary activity network for the above.

The PFD of a possible solution is shown in Figure 3.1 below. Because the PFD is often the product of a subjective process, it is always worth getting the person drafting the PFD to write down a rationale for the particular sequence of activities.(You will probably have to explain what a rationale is! I have found students simply producing a textual description of what is on the PFD e.g. 'the timetable can only be produced after the training plan has been completed'). For example, in Figure 3.1 the training plan will outline the structure of the course with rough timings for the major topics. This will have to be agreed with the client. The plan assumes that the training provider uses the design of the overheads as a preliminary step in the detailed design of the course. The overheads are then complemented by training notes and exercises. The manual brings these together into a package for the trainees. The number of trainees must be known before the material is printed so that we know how many copies to make.

There is no one right answer to this, and students might well identify gaps in the products above. For example, no training needs analysis has been produced. Hopefully, such discussions will illustrate the value of PFDs in clarifying such issues.

Figure 3.1

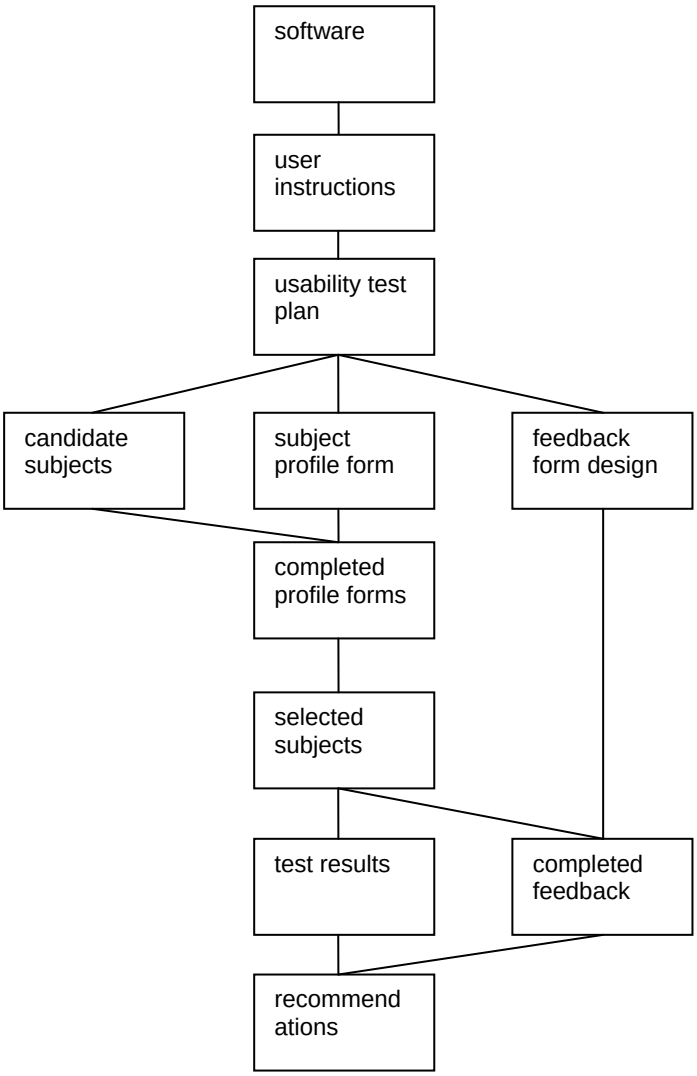


5. Question 4 in the Further Exercises for Chapter 1 refers to a scenario relating to a training exercise. Using that scenario, draw up a Product Breakdown Structure, a Product Flow Diagram and a preliminary activity network.

See Figure 3.2 for a possible PFD for the scenario.
The usability test plan is assumed to contain details of the number of subjects to be used and the overall profile in terms of previous experience, age etc of the group to be used. Volunteers will need to be found ('candidate subjects'). These will be given a form to complete. These forms will then be analysed and subjects chosen from these who conform with the required profile. The testing can now take place which will produce test results and feedback forms completed by the subjects. These can then be analysed and the

analysis used to produce recommendations about possible changes to the software to make it more usable.

Figure 3.2

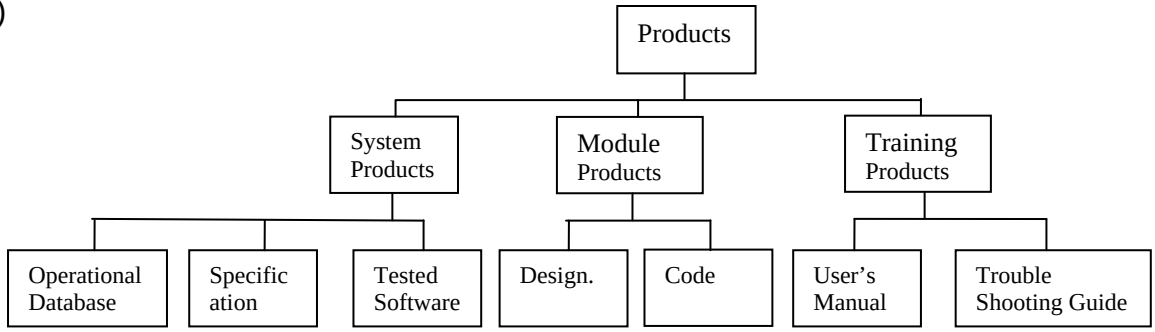


6. *The Brightmouth college intends to automate the routine activities of its library including issuing books to users, book return, handling fine collection, and querying availability of books. The library has about 10,000 books. At present, the activities of the library is being carried out manually by four library staff. The college intends to award the*

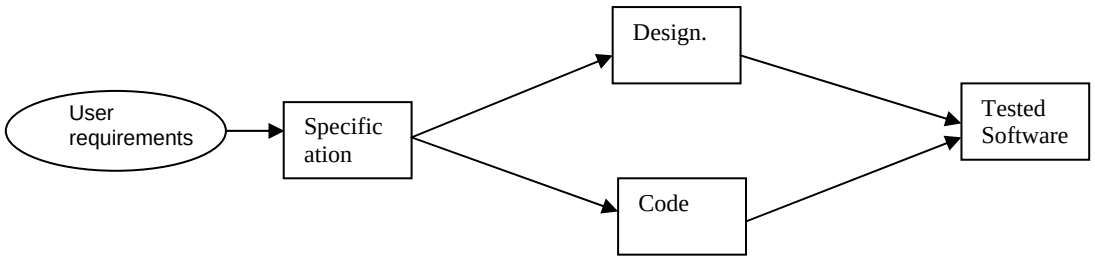
development of the software to a vendor. The software would have to be transferred to the library in a fully operational mode. To speed up the delivery of software, the vendor would have to create the operational database during the development of the software. This would involve entering the details of the existing books into a CSV (comma separated values) file. After development of the software, the CSV data needs to be imported into the software. After alpha testing, the software would have to be tested in the operational environment. For this, the software would have to be run along side the manual system at the library for a week. During this time, user training would also have to be conducted.

a. Identify and represent the deliverables using a product breakdown structure (PBS).
b. Develop the product flow diagram.
c. Develop an activity network.

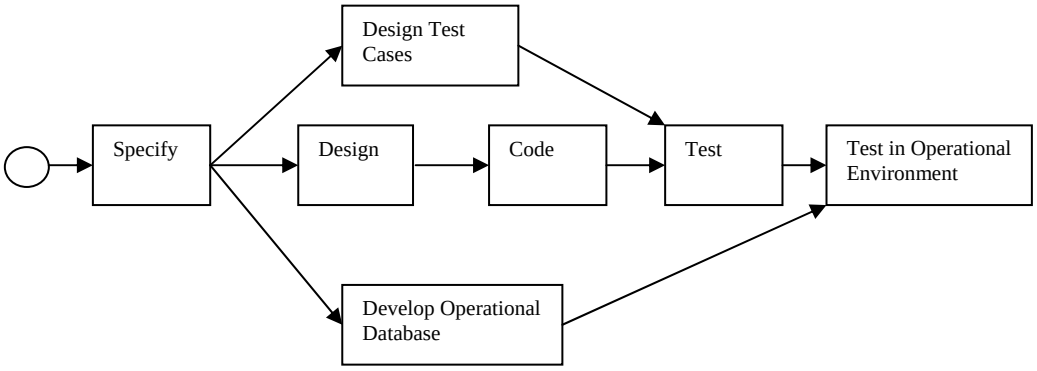
a)



b)



c)


Design Test Cases
Specify
Design
Code
Test
Test in Operational Environment
Develop Operational Database