M253 Resource Sheet

Project logs

1   Overview

The purpose of this *Resource Sheet* is to help you get started on keeping a project log. We will explain why keeping a project log is a valuable thing to do, give examples of the sorts of things that it is useful to put in a project log, and describe various ways in which a project log can be kept.

2   Introduction

The main reason why you might want to keep a project log (apart from being asked to as part of a course that you are studying) is to support you in your work, or a specific project that you are undertaking. You may be carrying out an experiment or survey as a research project, developing a website or designing a new product as part of your work, studying a course, or landscaping your garden at home. Each of these projects would benefit from recording at least three types of information, which we will illustrate within the context of studying M253 although the principle applies more generally:

1   *Factual information*. Recording information such as the websites you choose to evaluate and the criteria you are going to use to evaluate them.

2   *Development of ideas, plans and designs*. For example, at the beginning of a team-based project, what roles do you think you will need in the team and who do you think would be the best person to fulfil each role?

3   *Reflection on experiences*. Suppose you have just submitted a TMA, or completed a phase of project work. How well do *you* think you have done? Could your team have done better and if so, how? What are the lessons that you have learnt for the future? Answers to all of these questions are useful reflections on your past experience that you could record in a project log.

You may well have thought of other types of information that it would also be useful to record. We will discuss what you should put in your log later in this *Resource Sheet*, but first, how should you keep your log?

3   Starting a project log

3.1   *Recording the important*

In many disciplines, students and practitioners alike are advised to keep a record of information found, information sources consulted, observations, data, results, plans, ideas, and reflections in a *log*: a notebook dedicated to your work (whether that be a project, a course, scientific observation, lab work or even scholarly research in an archive). It has long been known that it is easier to recall things when you have written

them down and, having written them, it is easier to find them than to try to recall the detail. A log is an *aide-mémoire* that helps you remember facts, ideas, plans, data, and sources. It is *not* a simple recording of all the happenings of your day (as a journal or diary would be), nor is it an appointments diary. The log is for *you*, perhaps to share with colleagues, other members of your team, or in the case of courses, to show to your tutor.

A project log (or notebook) is a place (not necessarily a physical notebook – it could be electronic) in which you record your notes, ideas, thoughts, and sketches about one of more projects. Hohmann (1997) has a useful description of how to use a project log which can be summarised as follows.

- Keep your notebook with you at all times. The structure and discipline provided by taking notes isn't much help if you don't have your notebook with you.

- Use your project log. The more information your notebook contains the better. Outlines of reports you have written, a list of tasks that make up the project schedule, sketches of a project website, or the URLs of websites containing useful resources for the project could all be entered in your project notebook.

- Write legibly, preferably in ink. If you write illegibly, will you be able to read your entries several weeks or months later?

- Review your notebook regularly to check that issues have been addressed, actions have been done, and good ideas have been developed. Reviewing your project log regularly is one process that you may have to work at until it becomes a habit.

- Keep accurate dates (and, if you make entries frequently enough, times). Entries can be made daily, weekly, or monthly, or in response to the events that occur (such as meetings or brainstorming sessions). Knowing exactly when you did something supports your learning when you review your notebook, because you can reflect on where you have been, how you got where you are now, and how long it has taken.

- Keep it safe – the more you use your project log, the more valuable and essential part of your life it will become.

- Use abbreviations if you wish. Since your project log is primarily for your use, you can record ideas or phrases in a form of 'shorthand' provided that you will be able to read this back again: beware of using abbreviations and phrases you may not remember the meaning of later!

3.2   What to include

Include observations, descriptions, rough drawings or sketches, impressions, thoughts, ideas, opinions, sources of information (in sufficient detail to be able to find them again), data, and points agreed with others in a team. Not all entries need be written: drawing sketches or diagrams, or sketching out ideas in graphical form (for example using a mind map) is also a valid way of recording what you need in order to accomplish the purpose for which you have set the log up.

In this way you can use the log to:

- make notes, sketch designs, and explore ideas;

- practice writing descriptions;

- reflect upon your experiences.

To ensure that your entries are complete enough, you should consider making many of your entries conform to the journalist's five Ws: *who* (is involved), *what* (happened), *when* (did it happen), *where* (did it happen) and *why* (or how). This strategy is useful because it generates specific answers to these questions.

When recording information that you have read (whether an article, a book or a web page), you should aim to write no more than 150–200 words summarising the important points, possibly analysing what it says (if that is your task), and any reflections you may have about its significance to you. Each such log entry should record the author (or *anon.*), the work's title, the publication date (if the date is not known record *n.d.*), the chapter heading or pages if appropriate, the publisher and ISBN, or for websites the full URL and the date you accessed the site. This will enable you (or others) to find the original information again, or in the case of the web, know how recently the information was available in the form you found it. (Websites change too frequently for users to be able to depend on the web page remaining the same, or even remaining at all, after a short time.)

Figure 1 (on page 4) shows an excerpt from a log kept by one member of the M253 course team.

3.3 What not to include

Another way of explaining what a log should include is to list what it should not include. A project log *should not*:

- act solely as an appointment book or general diary;
- be written on loose scraps (or sheets) of paper, or in a variety of different places (such as several different notebooks);
- include everything that happens during your day or week, whether relevant or not;
- wander from the subject it was set up to record;
- be a polished piece of writing: it should 'record as found, when found'.

4 Keeping a project log

How you keep a log is a matter of personal choice (unless you are told to keep it in a specific format, see Subsection 4.3 below). There are two basic ways in which you can keep a project log: on paper or electronically. Both of these approaches have their own advantages and disadvantages, and similar considerations apply to both approaches in terms of their convenience, accessibility and durability (to name just three issues that are worth bearing in mind when choosing exactly how you are going to keep your log).

4.1 A paper log

If you choose to keep your log on paper then you could use a loose-leaf folder (although the disadvantage is that pages can easily fall out), or you could use a bound journal-style notebook (with the disadvantage that pages cannot be added). Your preferred size of folder or notebook will depend on where you work and how often you need to carry it.

The primary advantages of paper logs are their durability, convenience, and ease with which you can make an entry. All you need is something with which you can write. The chief disadvantages of paper project logs are the difficulty of making backup copies of pages of the project log and the difficulty of finding information again. With regard to the former point, you can always make photocopies of important pages, and as a workaround for the latter point, some people number the pages of their project notebooks and create an index page of the really important information that they think they might want to refer to in future.
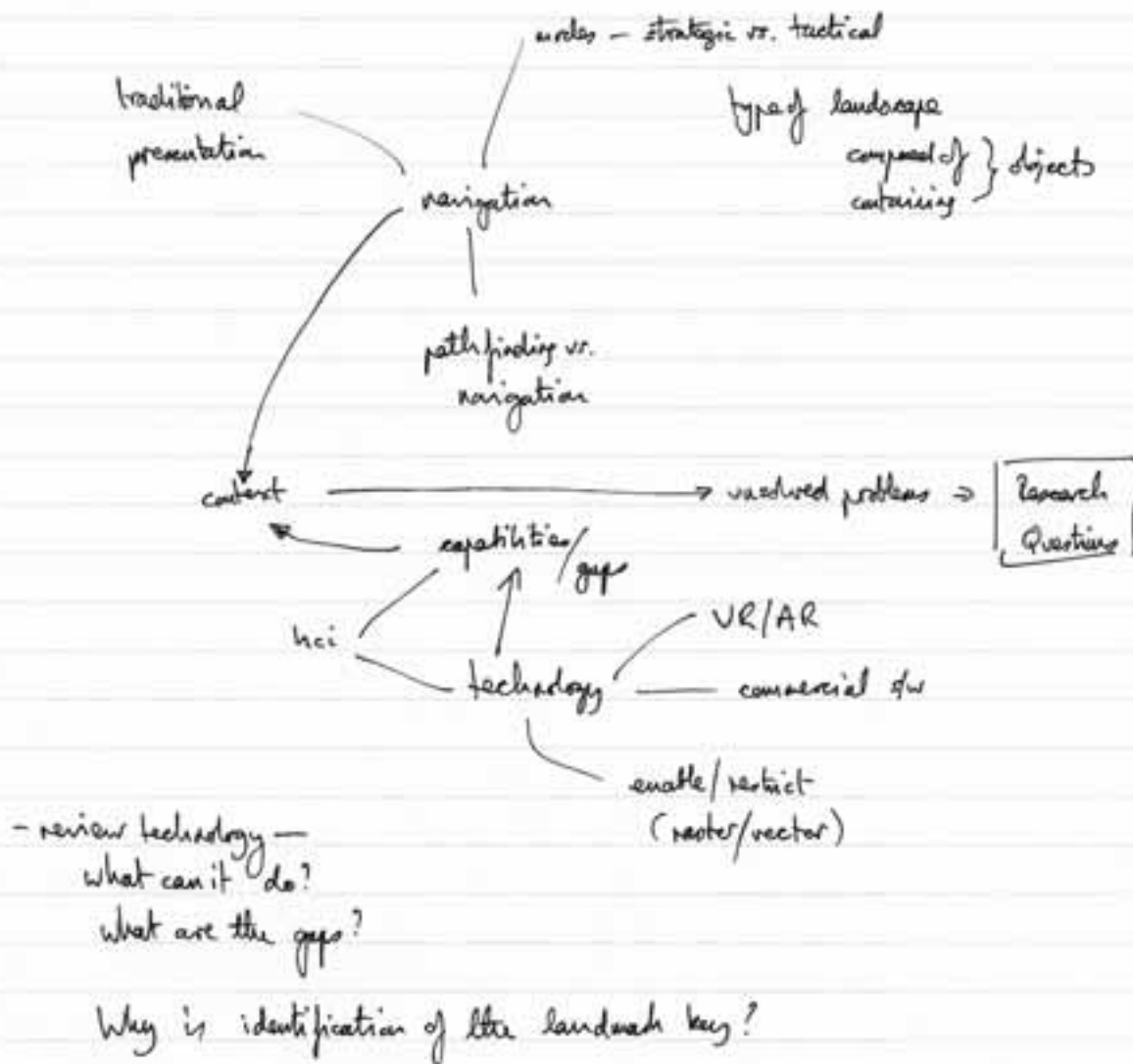
Figure 1   A page, from the log kept by one member of the course team, of notes made in a meeting (actually a record of a discussion around a whiteboard)

4.2 An electronic log

If you choose to keep a log electronically then you can use a word processor, a diary program or keep your project log online (using a blog or the Open University's MyStuff facility – see below for more details). There are considerable advantages to keeping your project log electronically if you are doing computer-based project work. For example, the ease with which you can copy-and-paste information between software applications means that your project log can become a valuable repository for all sorts of information. With an electronic project log you can search and backup your log very easily, correct erroneous entries, check your spelling, and not have to worry about writing legibly. However, electronic project logs do have their disadvantages. One is their availability. Even though computers are becoming increasingly portable, they do not have the convenience or ubiquity of paper, so when your computer or the data stored on it is unavailable, so is your project log. Another disadvantage is the permanence of the data. Due to the rapid pace of technological change you may not be able to read today's computer media in 10 years' time, and degeneration of backup media can occur in a much shorter time.

As we said at the beginning of this section, how you keep your project log is a matter of personal choice. To help you make that choice, we illustrate some of the above issues with three examples of how you might actually keep your project log.

4.3 Laboratory notebooks

Perhaps the most common form of project log is the laboratory notebook. These are used to record details of experiments carried out in the laboratory, or observations taken in the field, and the results obtained (see, for example, Series 1991). They are often kept in hardback, bound notebooks so that pages cannot fall out. In some professions, the keeping of a laboratory notebook is becoming increasingly regulated, because laboratory notebooks can be accepted as legal proof of the date of an invention, provided that the entry is countersigned and dated by a witness. Indeed, one course team member, who previously worked for an international company, said that they had special notebooks that were all numbered and logged. When the notebooks were completed they had to be returned to a special repository. Pages of the notebook were numbered and had a specific space for a countersignature. Co-workers spent time each week countersigning each other's notebooks and everything they stuck into them!

While this is a rather formal approach, it does demonstrate the importance of keeping good records of your work and the significance that can be attached to a project log book.

4.4 Blogs

A blog (or weblog) is a personal website on which an individual makes regular entries that records their opinions, web links and other items of interest to them. Entries are presented chronologically so a blog could be used to keep a project log, a personal journal or diary. Entries are time- and date-stamped; they can be tagged with keywords so that a reader can display all the entries on a particular subject, and they are searchable. The latter is a major advantage over any paper-based means of keeping a log.

Blogs do have their disadvantages, particularly from the point of view of using them as a project log. Firstly, like most other electronic forms of project log, entries in a blog can be edited or amended after they have been posted. Secondly, a blog is intended to be read by anyone and everyone, which is not necessarily what one would want from a log that is being used to record ideas, thoughts and personal reflections.

4.5 MyStuff

MyStuff is an online personal storage area provided for you by the Open University that you can use to store files or to record notes (much like a blog). In contrast to most blogs, MyStuff is private so only you have access to it, although you can choose to share items that are stored within MyStuff with your tutor or other students if you wish.

One way of keeping a project log in MyStuff would be as a series of notes, creating a new note for each new entry in your log. Like a blog, you can tag each of your notes with keywords to make it easier to search your log.

5   Summary

A personal log is a key tool in project work and in many professional areas. It could be kept on paper or electronically but the same issues of convenience, durability, and ease of use apply to both media. It should record facts, references, plans, ideas, thoughts and, if appropriate, summaries of conversations, exchanges by correspondence, etc. It should not be edited (except at the moment of writing to correct an error). Each entry should be dated (and perhaps timed).

6   Further resources

There are many resources on the web for writing logs. Many are aimed at particular domains, but there are a few more general resources that do set out what should be in a general project or scientific log and how it should be kept. What is contained in this *Resource Sheet* is based on the experiences of the team members.

Department of Biochemistry and Cell Biology Rice University (2006) '*Guidelines for keeping a laboratory record*' [online], http://www.ruf.rice.edu/~bioslabs/tools/notebook/notebook.html (Accessed 26 October 2007).

> This page is written particularly for experimental biologists who need to record the results of experiments.

ACM (2004) 'The blogosphere', *Communications of the ACM*, vol. 47, no. 12.

> This special issue of the *Communications of the ACM* is devoted to blogs.

BBC Webwise '*What is blogging?*' [online], http://www.bbc.co.uk/webwise/askbruce/articles/browse/blogging_1.shtml (Accessed 16 November 2007)

> This is a very short introduction to blogs.

IT Services, University of Warwick '*What is a blog?*' [online], http://www2.warwick.ac.uk/services/its/servicessupport/web/blogs/faqs/general/whatisit/ (Accessed 16 November 2007)

> One of over a hundred frequently asked questions (FAQs) on a comprehensive website about blogs.

Economics Network. '*Using blogs in economics*' [online], http://www.economicsnetwork.ac.uk/showcase/ayres_blogs.htm (Accessed 16 November 2007)

> Notwithstanding the title, this article is a good general introduction to blogs. Section 5 of the article, 'Uses for Economics', is the only section that is specific to economics.

Audience Dialogue (2007) *Learning journals* [online], http://www.audiencedialogue.net/journal.html (Accessed 26 October 2007).

A learning journal is a way of capturing your thoughts, questions and reflections as you study a particular course. It is not simply a summary of the course materials (although writing this can be a very useful study aid), nor is it just a record of when you studied, what you studied and for how long. Instead, a learning journal should be a record of your reflections and thoughts about the material you have been studying and the activities that you have undertaken. Its purpose is to support your study of the course and facilitate your engagement with it, so that you can make sense of what you have learnt, remember it and apply it. This web page on learning journals is written specifically for students studying online courses. There is a link to it from the *Tools for reflection* page of the *Effective study* section of the Skills for OU Study website (http://www.open.ac.uk/skillsforstudy/index.php).

Humphrey, W. S. (1995) *A Discipline for Software Engineering*, Addison Wesley Professional.

The Personal Software Process (PSP), as described in the above publication, is a 'self-improvement process designed to help you control, manage, and improve the way you work' Humphrey (1995). Aimed specifically at software engineers, the process involves reviews at every stage of the software development lifecycle, supported by measurement and reporting, so that the reviews are evidence-based.

7   References

Hohmann, L. (1997) *Journey of the Software Professional: A Sociology of Software Development*, Prentice-Hall.

Series, G.W. (1991) 'Keeping a laboratory notebook: an exemplar', *European Journal of Physics*, vol. 12, no. 5, pp. 201-3.