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# Managing a Research Project

## The challenges of independent research

All your study activities at university involve an element of self-management and organisation. These qualities are especially important, and will be tested to the full, when you undertake an independent research project as part of your dissertation (undergraduate or Masters) or thesis (PhD). Completing this research on time, and to the best of your abilities, will involve the completion of numerous interrelated activities and multiple deadlines, and require you to respond dynamically to any challenges you encounter. At the same time, your research project might be just one of a several key activities in which you are involved – especially so for an undergraduate dissertation.

## The common nature of a research project

Whether you are researching in the sciences, the social sciences or the arts and humanities, key elements of the deliverables (i.e. the written dissertation or thesis) and the intellectual ingredients of the deliverables (i.e. your research) remain largely the same.

Every dissertation or thesis will consist of an introduction, a main body and a conclusion. Included within this framework will be a literature review, an in-depth investigation of the topic, and some form of original research, leading to a critical analysis and discussion of its findings, both in their own right and in the context of what is already known about the topic.

These elements should be structured into a logical, systematic narrative that leads the reader through the subject matter and is formatted to meet your School’s formal submission guidelines.

## The stages of a research project

The basic stages involved in undertaking a university research project are as follows:

1. **Choose your research area**

Usually, it is best choosing an area that you have already studied or are studying within your academic field. Not only will this help you identify potential research, but you can be confident in finding a suitable supervisor and reliable sources within the university. Choosing an area that you also find particularly interesting will help sustain your engagement.

1. **Conduct preliminary research (scope out the topic)**

Survey current research surrounding your chosen subject area. Reflect on it carefully and take advice from academic staff to establish what has already been written on your chosen subject area. This will enable you to identify what you can do that has not been done before.

1. **Decide your research topic**

Clearly define and delineate your research topic. The more clearly you do so the more confidence and clarity you will have in what you are trying to achieve, and the easier it will be for you to monitor your progress. If you’re uncertain what you’re trying to achieve, how will you know whether you’re on course or not?

At this stage you might also formulate a provisional research question – that is, the question your research will answer:

**Research topic:** Investigate ‘A’ and ‘B’ to see if/how they interrelate.

**Research Question:** ‘To what extent is A caused by B?’

1. **Decide your methodology**

As you are deciding your topic, you should be investigating and considering your research methodology – how you will conduct your research. Is it going to be experimental, observational, theoretical, textual, qualitative, quantitative? Will it involve human subjects? Are there ethical considerations – specific protocols, procedures or approaches to follow? Think about the research method you have chosen; what advantages does it give? What insights might it yield? What difficulties might it pose? How has it been used before in your field of study?

1. **Submit/present your research proposal for approval\***

Most schools have a formal deadline for receiving research proposals/dissertation plans, and a formal approval process. In some cases, this is an assessment stage – so make sure you know exactly what you need to submit, and when, in order to progress with your project. Your school will have given you guidance about what your proposal should include. Generally, the common elements are:

* Your main research question/problem/title
* Questions or concerns that will help you solve your main research problem
* A brief literature review or list of key texts/sources
* An overview of your methodology
* A timeline showing your main research project tasks

\*Please see our study guide on ‘How to Write a Research Proposal’ for detailed advice on this.

1. **Finalise your topic and methodology**

You may need to revise your research plan in the light of feedback you receive during the approval process. Many students are overambitious in their aims; academic staff have a much clearer idea of what is achievable and necessary in terms of a successful research project, so be guided by their advice. You may also need to modify your methodology in the light of your initial research, or a pilot study. It may be necessary, for example, to alter a questionnaire that isn’t generating the data you were expecting.

1. **Conduct you research (fieldwork)**

This might take place in a laboratory, in a library or archive, at a computer, on the streets or in a field. Whatever the location, this is the practical activity of collecting raw information or data. Be aware that what you think you are going to find out, and what you actually *do* find out, can often be very different, so be prepared to alter your research aims/question accordingly.

1. **Analysis/data processing**

Whatever your research topic, you will need to analyse and process the information you have collected in order to make sense of it. This might involve statistical analysis, generating graphs, charts or tables, organising information into categories, or critical appraisal of texts or events. As well as finding out something, you need to understand what it means within your academic field.

1. **Writing up**

This is the process of producing the written document – your dissertation or thesis – upon which your research project will be assessed. Allow enough time to improve and revise your work through a series of drafts, and to edit and proof-read the final document – including ensuring that any graphs/images referred to in the text are properly numbered and labelled, and that your referencing is error-free – before formatting and binding the finished document. Do not underestimate how long the writing up process will take.

1. **Submission**

All academic research projects are time constrained, so you will have a specific deadline for submitting your work. With longer research projects, you will also have intermediate deadlines (e.g. progress/upgrade boards). Consequently, you will need to time-manage each stage of your work to ensure that you complete the overall project on time.

## Project managing your research

Any complex project involving multiple activities and deadlines requires some form of management. Using simple project management techniques will allow you to keep control of your research project – to schedule your work more effectively, to identify how much time you have to spend on each stage, to create intermediate milestones that will tell you if you’re on schedule or not (and allow you to respond accordingly) and give you a clear overview of your progress.

One simple but highly effective technique is to produce a Gantt chart. This provides you with a clear visual plan of your research project, based on scheduling the different stages involved against a time base. The example below (Figure 1) is based on the ten basic research project stages, scheduled against two (hypothetical) formal deadlines – submission of the proposal in week 10 and submission of the finished dissertation in week 24:

Gantt chart displaying weekly research timeline on x axis and simple research tasks on y axis.

Figure 1: Simple research project Gantt chart

This example is typical of an undergraduate or taught Masters’ dissertation. Longer research projects (PhD, Masters by research, etc.) will generally have more activities spread over a longer timeframe (See below, Figure 2, for an example of a project plan for a humanities PhD).

Gantt chart displaying monthly research timeline for 3 years on x axis and detailed research tasks on y axis. 

Figure 2: Humanities PhD example Gantt chart

In project management, the scheduling of individual activities is always worked backwards from the deadline. Thus, the amount of time that you have to complete each task is a function of the overall project schedule. As shown above, some tasks have to be carried out consecutively (i.e., you can’t start the next task until you’ve completed the previous one), but other tasks can be carried out at the same time, or started before the previous task has been completed, (e.g. you might be able to start analysing your data whilst you’re still collecting it). What you also need to bear in mind with undergraduate dissertations is that your research project constitutes only one part (25%) of your academic activities, and that you’ll be working on other assignments, reading, exam revision, etc, at the same time. As such, it is important that you make full use of the available time period and balance your priorities accordingly.

Tip: With longer-term projects such as these, it can be difficult to stay focused and motivated. Try to dedicate some time to your project every day/week (depending on your other academic commitments) and break your tasks down into smaller chunks so that they are more manageable. The Pomodoro technique can also be helpful for generating small bursts of concentration. If you are struggling, maybe read an article on your topic to remind yourself of your interest in the area or talk to fellow students or your supervisor(s).

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