How to do a dissertation

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What is a dissertation?
Stages in dissertation process
Stages in dissertation process

choosing a topic;
Stages in dissertation process

choosing a topic;
developing a research question;
Stages in dissertation process

choosing a topic;
developing a research question;
effective planning of the research;
Stages in dissertation process

choosing a topic;
developing a research question;
effective planning of the research;
being organised and methodical while conducting your research;
Stages in dissertation process

choosing a topic;
developing a research question;
effective planning of the research;
being organised and methodical while conducting your research;
reporting the research.
Choosing a topic
10,000 IDEAS
for term papers, projects, reports and speeches
5th edition
intriguing, original research topics for every student's need
too many ideas

but with no specific research question
Important

Focus on areas you are interested in within the topic
How to move forward?

- talk to others
- look at other writing
- look through the previous dissertations
- think about your own interest
A research study can replicate an existing study in a different setting; explore an under-researched area; extend a previous study; review the knowledge thus far in a specific field; develop or test out a methodology or method; address a research question in isolation, or within a wider programme of work; or apply a theoretical idea to a real world problem.
People who grew up in difficult circumstances and yet are successful have one thing in common; at a crucial juncture in their adolescence, they had a positive relationship with a caring adult.

- Bill Clinton, President of the United States
implications of the choice?

You should think realistically about the practical implications of your choice, in terms of:
the time requirement;
necessary travelling;
access to resources; and
possible costs.
Developing a research question
Try describing it as a research problem that sets out:

• the **issue** that you are going to be investigating;

• your **argument** or thesis (what you want to prove, disprove, or explore); and

• the **limits** of your research (i.e. what you are not going to be investigating).
Research Question
Every task you undertake should begin with you checking your research problem and asking

“will this help me address this problem?”
changes are inevitable

You should be willing to revise your research problem as you find out more about your topic.

You should always talk to your mentor before you make any substantial revision to your plans, and explain why you think you need to make the change.
effective planning of the research

• Writing a research proposal
• Creating a research plan
• Procrastination
• Realistic planning
research proposal

Topic: this project will study...

Question/problem: to find out...

Significance: so that more will be known about...

Primary resources: the main data will be...

Secondary sources: additional data comes from...

Methods: the research will be conducted as follows...

Justification: the method is most appropriate because...

Limitations: there are some matters that this methodology may not help me to explain. These might include...
research plan

Project Gantt Chart

27th, February, 2012

<table>
<thead>
<tr>
<th>Tasks</th>
<th>Time (Date)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome and project brief</td>
<td>25/2</td>
</tr>
<tr>
<td>Analysis of existing similar tools</td>
<td>10/3</td>
</tr>
<tr>
<td>Related academic work</td>
<td>24/3</td>
</tr>
<tr>
<td>Links to related news items in the tech media</td>
<td>17/3</td>
</tr>
<tr>
<td>Interviews with users or focus groups</td>
<td>31/3</td>
</tr>
<tr>
<td>Mockups and Ideas</td>
<td>31/3</td>
</tr>
<tr>
<td>Scenarios and Personas</td>
<td>31/3</td>
</tr>
<tr>
<td>Web maps and Storyboards</td>
<td>7/4</td>
</tr>
<tr>
<td>Tech demos and code snippets</td>
<td>14/4</td>
</tr>
<tr>
<td>UML diagrams</td>
<td>21/4</td>
</tr>
<tr>
<td>Overview of standards and protocols</td>
<td>28/4</td>
</tr>
<tr>
<td>Link to demo software</td>
<td>5/5</td>
</tr>
<tr>
<td>Video of software in action</td>
<td>12/5</td>
</tr>
<tr>
<td>Testing data</td>
<td></td>
</tr>
<tr>
<td>Outcomes of usability evaluation</td>
<td></td>
</tr>
<tr>
<td>Overview of pitch to dragons den panel</td>
<td></td>
</tr>
</tbody>
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Procrastination

People procrastinate for various reasons for example:

- poor time management
- daunted by the scale of the task
- negative beliefs
- loss of motivation
- perfectionism
- difficulty in concentrating
- need to feel under pressure
- personal problems
Realistic planning

To improve the prospect of completing on time, and avoiding procrastination, you need to:

• be realistic about when you can/will start;
• devote time to planning and revising your plan;
• try to work out if any of your research will take a set amount of time to complete;
• allocate appropriate time for any travelling you need to do for your research;
• include other (non-dissertation related) things that you have to do between now and then;
Realistic planning

• have clear and achievable objectives for each week;
• focus on one thing at a time;
• leave time for editing and correcting;
• reward yourself when you complete objectives that you have timetabled; and
• if you fall behind make sure you spend time reworking your plan.
Stages in dissertation process

- choosing a topic;
- developing a research question;
- effective planning of the research;
- being organised and methodical while conducting your research;
- reporting the research.
being organised and methodical

The role of the supervisor

• agree a timetable of meetings at the start of your project and stick to it;
• make sure that each meeting has a focus e.g. “setting a research problem”, “analysing the data”;
• send something that can form the basis of a discussion about your progress to your supervisor before each meeting. This could include your research plan, early results of your data collection or draft chapters;
• turn up on time to each meeting you have arranged. Do not assume that your supervisor is available at all times to see you;
• at the end of each supervision agree some action points for you to focus on before the next time you meet; and
• keep a record of what you decide in supervision sessions.
Undertaking literature survey

Why?
How?
why literature survey?

Regardless of whether you have been given a dissertation topic or you have developed your own ideas, you will need to be able to demonstrate the rationale for your research, and to describe how it fits within the wider research context in your area. To support you in doing this you will need to undertake a literature review, which is a review of material that has already been published, either in hard copy or electronically, that may be relevant for your research project.
**how literature survey?**

- e-resources
  - digital theses
  - digital repositories
  - e-journals
  - search engine
  - university library
  - bibliographies
useful sites

• dspace.mit.edu
• adt.caul.edu.au
• shodhganga.inflibnet.ac.in
• sciencedirect.com
• dl.acm.org
• ieeexplore.ieee.org
• scholar.google.com
• doaj.org
reporting the research

Transition from research to writing
reporting the research

• In your research plan you need to specify a time when you are going to stop researching and start writing
• ask yourself the question: ‘Do I need to do more research?’
• Speak to your supervisor about your progress
skeleton of dissertation

- Title page
- Abstract
- Acknowledgements
- Contents page(s)
- Introduction
- Materials and methods or Literature review
- Results or Sources and methods
- Discussion or Findings
- Conclusions
- References
- Appendices
avoid plagiarism
Research areas in Computer Science
thank you