**IS4S706 Project Management & Research Methodology**

**Research Methods Tutorial**

**Exercise 1: Internet Search**

The internet is arguably the first place we go to find information. Most of us search the internet to read stories we are interested in, to follow current issues or debates, and to learn new things. In fact, which website links we tend to click on may be an indication of what we are interested in. Internet search can also inspire new topic ideas and questions. Therefore, it might be a good starting point for you to brainstorm the internet with a few potential topic ideas.

Have a list of two or three general project topic ideas that you may have. Using your favoured internet search engine, type in a topic: this could be a simple word, a string of words, or a question. As you already know, trying a few different words gives you an idea about what terms might lead you to the best results.

Browse the websites and information which turn up on the search. There could be various types of information, including statistics, popular media stories, bookseller websites, teaching materials posted on various university webpages, government documents, and blogs by individuals and non-profit organisations. Follow your interests and explore the various links as your intuitive interests guide you. Take notes as needed.

Do this for each of your two or three topic ideas you may have. After gaining more information on each of these from the internet, ask yourself which of the initial topics has made you feel the most engaged, or which one you have had the most fun with[[1]](#footnote-1). Do you think you can develop this as a research topic or Masters Project? Try to construct some specific questions about this topic, which will be appropriate for your specific academic award.

**Exercise 2: FindIt Search**

Following on from Sharon’s LRC Presentation, you should now be familiar with FindIt and the databases available to you for your research project. For the “best” topic idea you’ve identified above in Exercise 1, can you find (and download) the FIVE key reference papers in your study area?

If you have a very specific project idea in mind, which is not as “researchy”, novel or new, e.g. “Develop a Website to document through the use of multimedia, Cardiff City’s domination of Swansea City FC over the last 100 Years” … can you STILL identify FIVE key reference papers in your study area?

* E.g.1 Key Paper for Developing a Sporting Multimedia Website
* E.g.2 Key Paper for Integrating Multimedia / Database into a Website
* E.g.3 Key Paper for Digital Storytelling
* E.g.4 Key Paper for HCI & Accessible Visual Design
* E.g.5 Key Paper for Evaluating Web Sites, etc.

(i.e. whatever subject you choose, there will always be relevant and related KEY Literature out there!).

**Exercise 3: Research Methods**

In your topic area, can you find some proven Research Methods in this field of study? For example, what approaches have others used? What approaches to data collection have been utilised? Are they small scale or large scale? Qualitative or Quantitative? Can you find any published material which documents the Research methods in your field? (e.g. SAGE Research Methods).

**Exercise 4: Formulating a Research Question**

The questions below considers some issues for you to think about when formulating your research questions. You can use these for planning your own study and for assessing existing studies by other researches.

***Q.1 Does your study have a research question which is spelled out clearly?***

***Q.2 You should be aware of where your research question came from and what you want to achieve with it:***

* Is YOUR interest in the contents of the research question the main motivation?
* Or is answering the research question more a means to an end, like obtaining an MSc degreee?

***Q.3 How many research questions does your study have?***

* Are there too many?
* Which is the main question?

***Q.4 Can your research question be answered?***

* What could an answer look like?

***Q.5 Can your research question be answered empirically?***

* Who can provide insights for that?
* Can you reach these people? (in lockdown?).
* Where can you find such people?
* Wht situations can give you insights for answering your research question, and are these situations accessible?

***Q.6 How clearly is your research question formulated?***

***Q.7 What are the methodological consequences of the research question?***

* What resources are needed (e.g. software, data, time)?

***Q.8 If necessary for the type of study you chose, did you formulate hypotheses?***

* Are they formulated clearly, in a well-defined and testable way?

***Q.9 Can your hypothesis be tested? By which methods?***

(Adapted from “Introducing Research Methodology”, Uwe Flick 2015, SAGE Publications).

**Exercise 5: Bringing it all Together (Please bring this along to class next time, i.e. e-mail Dave).**

Very briefly (no more than one page), can you define a very provisional research project proposal. Refer to the lecture slides for possible content; or base it on the Coursework 2 Proforma. For example, your proposal might include a succinct Title; a one or two line description of the subject and topic area; a series of research questions; a hypothesis; a proposed research methodology and methods; 3 or 4 references – including one which recommends or justifies a suitable Research Method (e.g. from SAGE); and a proposal for your data collection and analysis strategies. (***PLEASE NOTE:*** *This is just a very formative exercise, so does not need to be your actual proposal for the Coursework or your actual MSc Project itself. Although, it could be*).

1. Please Note: “fun” is not applicable to MSc in Computer Systems Security students. (Only Joking). [↑](#footnote-ref-1)