

Research Design for Educational Technologists

Organization: VCILT, University of Mauritius

Lecturers

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Place: VCILT

This is a "crash course" on Research Design, Research Methodology and some practical issues regarding the making of an MSc thesis. Target audience are Master Students in Educational Technology from various backgrounds.

Objectives:

- Know about fundamental principles of an academic project
- Be familiar with three major classes of research designs: (1) Theory-testing approaches, (2) Qualitative and new theory-creating research, (3) Design-science research.
- Be aware of the fundamental elements of a Research Design (1) Definition of a subject, (2) Research Goals and Questions, (3) Literature Review and selection of theoretical and conceptual frameworks, (4) Approach and Methodology: Operational Research Questions, Analysis frameworks and methodological techniques.
- Learn basic (or at least the existence) of a few selected research methodologies, e.g. data gathering, sampling, simple quantitative and qualitative data analysis.
- Deliverable: A draft project for your master thesis.

Program:

0_Preparation - 17/3/2005

Homework Preparatory task (Homework I)

To be handed in at course start please !! Each student should should prepare 1-2 pages regarding his topics of interest. Your text should include the following items:

- A "working title" of your research subject
- Elaborate the title with a few sentences.
- Present a provisional list of your theoretical and practical goals
- Based on your goals, present a list of provisional research questions and/or working hypothesis
- (Optional) additional informations, such as contacts taken, examples of interest, Weblinks, etc.

Remarks:

- Students who hesitate among several subjects can present 2 or more different texts.
- Please use HTML or XHTML. Keep this page's layout simple please (Use tags like h1, p, ul to structure your text. NO div, frames, table layouts etc. !)
- Bring your text in electronic form (e.g. with a USB key) and use a meaningful filename in the following format: name-firstname-homework-1.html. This will allow us to keep track of your work.
- Do not worry about the quality of your text at this stage. Its purpose is to open discussion. You will have plenty of time to work on it during this course. Anything you present at this stage is better than nothing !

Return date: Wednesday, March 23, 16:00 (at course start).

1_Wednesday - 23/3/2005

Session Preparation
 Room (16:15 - 16:45) Presentation of the program + Q/A , (DKS)
 16:15 - 16:45

2_Friday - 25/3/2005

Session What is research ?
 Room (9:00 - 9:30) Theory of science: What is an academic piece of work ? , (DKS)
 9:00 - 9:30

Session Introduction to empirical research
 Room (9:30 - 10:30) Fundamental principles of empirical research , (DKS)
 9:30 - 12:00 (10:30 - 11:00) How to find a research subject , (DKS)

(11:00 - 12:00) The research plan and conceptual frameworks , (DKS)

Session **The Art of Research Design**
Room
13:00 - 15:30 (13:00 - 13:30) Discussion - Initial student projects , (DKS)
(13:30 - 14:30) Theory-driven approaches (surveys, experiments, quasi-experiments) , (DKS)
(14:30 - 15:00) Theory-finding approaches (ethnographic and clinical studies) , (DKS)
(15:00 - 15:30) Design-oriented approaches (development, instructional design) , (DKS)

Session **Q/A**
Room
15:30 - 16:00 (15:30 - 16:00) Presentation of homework II and other Q/A , (DKS)

Homework **Homework II**

Revise your text (or present a new subject). Your text should include the following items:

- A "working title" of your research subject
- Elaborate the title with a few sentences.
- Present a provisional list of your academic goals (theoretical and applied)
- Present a list of personal, social, practical goals that will NOT be part of your master thesis.
- Present a list of provisional research questions and/or working hypothesis. Make sure that each goal is represented by at least a question.
- For each research question, make a short statement on how you plan to answer it. Relate your answer to conceptual frameworks, analytical tools (models, schemas, grilles d'analyse), data gathering techniques and data analysis techniques, etc. when appropriate. Don't go too much into details, since you may have to revise your list of questions

3_Monday - 28/3/2005

Session **Project Preparation**
Room
16:00 - 19:00 (16:00 - 19:00) Presentation and Discussion of Homework II , (DKS, MS)

Homework **Homework III**

Revise your text and present it like a research plan for a Msc thesis. It should include the following items:

- A "working title" of your research subject
- Elaborate the title with a few sentences.
- Present a list of your academic goals both theoretical and applied. (Skip the list of personal, social, practical goals that will NOT be part of your master

thesis).

- Present a list of theories and/or theoretical frameworks that relate to your goals and to your research questions. This includes design methodologies for those who are concerned. Try to find a theoretical framework that can provide you with a central focus on how to look at things.
- Present a list of provisional research questions and/or working hypothesis. Make sure that each goal is represented by at least one question and that your questions also relate to theory. If you can't find any theoretical grounding, say so. Note that you also will have to present formal hypothesis if your approach is theory-driven (e.g. experimental).
- Present a short draft of your your research design. Make sure that it is "vertically integrated" and make sure to include all the requirement elements as best as you can on this short notice: E.g. make a explicit your approach (research type) and globally make sure that we understand how you are going to answer your questions (or test your hypothesis). Therefore, make the necessary methodological statements: present analytical grids; talk about sampling (selecting of cases and observations); present the experimental design (if you have one), for concepts in your questions that need empirical data-gathering define data-gathering and analysis techniques, etc.
- Include a bibliography (sources you did use or that you plan to use)
- Please make sure to include your first-name and name on the paper !

4_Tuesday - 2/4/2005

Session **Introduction to Data Gathering**
 Room (16:00 - 17:00) Quantitative data , (DKS)
 16:00 - 18:00 (17:00 - 18:00) Qualitative Data , (DKS)

Session **Q/A - Project Work - Homework III**
 Room (18:00 - 19:00) Work and discussion on Homework III , (DKS)
 18:00 - 19:00

5_Wednesday - 29/3/2001

Session **Introduction to quantitative data analysis**
 Room (16:00 - 17:00) Introduction to Survey Analysis , (DKS)
 16:00 - 17:00

Session **Introduction to qualitative data analysis**
 Room (17:00 - 18:00) Qualitative Data Coding and Analysis , (DKS)
 17:00 - 18:00

Session **Q/A - Project Work - Homework III**
 Room (18:00 - 19:00) Work and discussion on Homework III , (DKS)
 18:00 - 19:00

6_Thursday - 30/3/2005

Session	Wrap up
Room	(16:00 - 17:30) Presentation of projects - Group 1 , (DKS, AS, MS)
16:00 - 19:00	(17:30 - 19:00) Presentation of projects - Group 2 , (DKS, AS, MS)

7_Friday - 1/4/2005

Session	Writing and planning a thesis
Room	(16:00 - 17:00) The Structure of master thesis , (DKS , MS)
16:00 - 18:00	(17:00 - 18:00) Project and Crisis Management , (DKS)

DKS,