

BN5035 MENG IN INTERNET OF THINGS TECHNOLOGIES

MIOT H6023 RESEARCH PROJECT (PART 1: RESEARCH METHODS)

ASSIGNMENT 1 [RESEARCH PROPOSAL]

DUE DATE: **JANUARY 11, 2019**

CA WEIGHTING: **10% OF FINAL GRADE**

Description of the key elements of a comprehensive **Research Proposal** are outlined on Page 2. Developing such a proposal, will start from identification of an appropriate Project Title/Topic, through literature search/review, and the development of methodology and schedule of work, is an iterative process. You will need to develop your thought, in consultation with your assigned supervisor and with planned peer-review with your colleagues and associates while modifying and refining the drafts accordingly. In this process, Key Questions are (Please revisit the Proposal Assessment Rubric in Research Handbook):

1. Is your research question of sufficient importance?
2. Have you clearly demonstrated the originality of your topic?
3. What will the research add to existing knowledge or generate new knowledge on this topic?
4. Does the proposal articulate knowledge of the background literature and/or the topic?
5. Are the aims and objectives clear, succinct and unambiguous?
6. Are the aims and objectives realistic in terms of what can be achieved during the research (available resources, time, access to participants, for example)?
7. Are the aims and objectives supported by the defined methodology?
8. Are the connections between assumptions, theoretical perspectives and methodological position clearly stated/defined?
9. Is the methodology well justified, and reasons given why other methodologies were not chosen?
10. Have the appropriate methodological limitations been highlighted?
11. Does the adopted approach match the issues to be addressed?
12. Is the proposed timescale appropriate and realistic? Is the overall plan achievable in the time available?
13. Is information about experiments/data collection method(s) sufficiently detailed?
14. Is information about the data analysis method(s) sufficiently detailed?
15. Is there enough information about required resources and budget? Are all costs relevant and justified?
16. Is it clear how the results are to be disseminated?
17. Has the expected impact of the research been demonstrated?

Instructions on Submission of Assignments:

This Assignment will contribute to the final examination grade as specified, and it is required that the submission:

- (1) Should be in neat typed format in MSWord;
- (2) MUST be submitted on or before the specified date, except with an approved deferral date;
- (3) Should reflect independent work.

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| Instructor: Dr Philip Owende Office: Room F011 Ext: 1128 Email: philip.owende@itb.ie | What do you honestly consider will be a fair score for this assignment that you are handing in? | Self assessment [Mark out of 100] | Mark Awarded |
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GUIDELINES FOR DEVELOPING A RESEARCH PROPOSAL

A research proposal is an important document that provides a detailed description of your research project. Proposals can vary in terms of structure and style, depending on the purpose, methodology and audience. However, a good proposal should be clear, well written, well justified in terms of topic and method, and have a clear timetable and well-developed budget. In general, a Proposal should include the following sections:

- (1) *Title*—This should be short and explanatory. It can hint at your research question, your methodology and your research population. If you are struggling to choose a title, brainstorm possible titles and choose the best, or discuss possible titles with your assigned supervisor and peers.
- (2) *Background*— This section should contain a rationale for your research. Why are you undertaking the project? Why is the research needed? This discussion should be placed within the context of existing research and/or within your own experience or observation. If you are unable to find any other research that deals specifically with your proposed project, point this out, illustrating how your proposed research will fill this gap and create new knowledge.
- (3) *Aims and objectives*—The aim is the overall driving force of the research and the objectives are the means by which you intend to achieve the aim. You will need to provide one clear and succinct aim (perhaps with one or two subsidiary aims) and several objectives that relate to your aim(s). Your aims and objectives must relate to your research question and demonstrate how this will be articulated.
- (4) *Methodology*— This section describes your proposed research methodology and provides a justification for its use. Why have you decided on this particular methodology and rejected others? How does your proposed methodology relate to epistemological standpoint and theoretical perspective? Can you foresee any problems with this methodology, and, if so, how do you intend to overcome them? If you have chosen a less well-known methodology (or a multiple or mixed approach), you may need to spend more time justifying your choice than if you had chosen a more traditional methodology.
- (5) *Research methods*— These are the tools that are used to collect your data and answer your research question (samples, numbers of people to be contacted, experiment, methods of data collection and methods of data analysis, for example). You need to illustrate how these methods relate to your methodology and discuss why they are the most appropriate to answer your research question.
- (6) *Timetable*— This should include tasks such as time taken to conduct background research, questionnaire or interview schedule development and piloting, data collection, data analysis and report writing, for example. The above expressed in a Gantt chart is useful for visualisation.
- (7) *Budget and resources*— This section is required to adjudge overall resource commitment by the department. All costs, e.g, personnel equipment, travel, subcontracting etc. should be justifiable and reflect value for money, in terms of strategic importance and research impact.

[Please note: in all funded research, the funding body/organisation may only meet acceptable costs & will want to see value for money, in terms of strategic importance & research impact]
- (8) *Research impact*— Research impact is defined as ‘the demonstrable contribution that excellent research makes to society and the economy’. For some researchers this may be both difficult and controversial, but a necessity.
- (9) *Dissemination*— This section demonstrates how you intend to let others know about the results of your research. This can be through producing a thesis and providing a copy for the university library, journal papers (including deposits in open access repositories), conference papers, internal and external seminars, blogs, lectures, monographs, chapters for books and entire books, for example.
- (10) *References and bibliography*— The reference section contains all the literature to which you have referred in your proposal, and the bibliography contains all other relevant literature. Ensure that you use the correct referencing procedure as covered in Lecture 3: Sources & Use of Information.