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Online

Research Methods and Professional Practice: Seminar: 3 Karen Outram



Contents:

- **Unit 5: Interviews and Survey Methods**
- Engage with reading materials and lecture casts
- There is also a formative reflective activity in unit 5
- **Unit 6: Questionnaire design**
- Wiki activity: Questionnaires: formative [feeds into your e portfolio]: As follows:
 - Find a questionnaire and critique the design, both the format and the questions used.
 - Consider areas such as ‘why is this question included?’, ‘is the form of the question appropriate?’ etc. How can you improve the questionnaire?
 - Put your analysis in the module wiki and comment on others’ analyses.



Unit 5 & 6 builds on the discussions from Unit 3&4:

- We looked at:
- Different methods of collecting research
- Using different tools to gather research
- Remember that research comes in the form of primary and secondary research and
- That all research is either interpreted using qualitative, [written] or quantitative [numerical/statistical] methodologies



Unit 5 :

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Unit 5: Interviews and Survey Methods

Welcome to week 5 where you will be introduced to the use of interviews and survey methods.

Conducting in-depth interviews is one of the most common qualitative research methods. It is a conversational piece, involving only respondent at a time. It provides opportunities for the researcher to get in depth details from the respondent.

A survey is one of the most important quantitative methods of collecting data. There are various types of surveys or polls and they are used to explore opinions, trends, etc. Online surveys are more generally used, with easier accessibility for the target respondents.

These methods are often used in research, but not always well. Often, they are used together to gain further insight into specific area of the investigation.

We will also introduce pre- and post-testing methods which can be used with any of the research methods you have seen. They present a viable "before-and-after" picture of the implementation of a new process or system.

In this unit we shall:

- Introduce you to interview methods and survey methods.
- Consider the definitions of population and sample.
- Introduce the concept of pre- and post-testing.

On completion of this unit you will be able to:

- Understand how interviews and surveys fit into research and whether either or both of these might be useful for your investigation.
- Understand how pre- and post-testing can be used in research.

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Unit 5 looks at:

- How interviews and surveys are used in research
- Conducting thorough and in-depth interviews [a focused method of gaining research – primary research]
- Watch the lecture cast in unit 5 and please engage with the reading unit materials
- This weeks readings and lecture casts will help us understand how surveys and interviews inform research and how different research types inform different outcomes for different investigations
- How pilot research can then inform focused research [surveys for example].



Unit 6 :

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Unit 6: Questionnaire Design

Welcome to week 6 where we will be looking at the various aspects of designing a questionnaire.

To start, let us clarify the difference between a questionnaire and a survey. A survey is a comprehensive method used for the gathering and analysis of data and will involve a questionnaire. A questionnaire on the other hand, just refers to the set of questions with answer choices which is used to conduct a survey.

So, a questionnaire is a valuable research instrument as it offers a researcher flexibility in gaining information from respondents, like a written interview. It can be carried out online, over the phone or face-to-face.

The type of questions you use (open or closed, or both) will depend on whether you are carrying out quantitative or qualitative research, or mixed method). Some questionnaires are better than others and mistakes are easy to make, especially when you are working in a technical area.

In this unit we shall:

- Introduce the different methods of obtaining responses.
- Discuss how to improve the responses you obtain.
- Consider how you would analyse the responses from each type of question.

On completion of this unit you will be able to:

- Tell the difference between a good questionnaire and a poor one.
- Design a questionnaire to obtain the responses you will need for your investigation.
- Understand how the data obtained can be analysed.

References

QuestionPro (2021) Questionnaire vs Survey: Is there a Difference?

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Unit 6 :

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QuestionPro (2021) Questionnaire vs Survey: Is there a Difference?

Lecturecast

1 hrs

Questionnaire Design

✓

Reading

4 hrs

Unit 6 Reading

✓

Formative Activities

10 hrs

e-Portfolio update: **Data Collection** - Think about which data collection tool will be suitable for your area of investigation (in this module and/or in your Project module). How will you collect it and what analysis would you hope to perform? How will this answer your research question? This should also be included in the presentation of your Project Proposal in Unit 10.

Complete the Wiki Activity below.

Wiki Activity: Questionnaires

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Unit 6 requires:

- **Designing a questionnaire:**
- **In this unit for formative feeding into to e-portfolio you are asked to develop:**
 - **Wiki Activity:** Questionnaires and
 - **e-Portfolio Update:** Data Collection method
 - **Learning Outcomes:**
 1. Understand the difference between a good questionnaire and a poor one.
 2. Understand how to obtain the responses you will need for your investigation.
 3. Understand how the data obtained can be analysed.



Unit 6 requires:

- You will need to watch the lecture cast
- Read through all required unit 6 reading materials, [both essential and additional]
- I will be providing generic formative feedback for the above. Remember that all feedback feeds into your summative, [and also the e-portfolio]



Unit 6 formative activity :

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4	e-Portfolio Activity: Literature Review Outline	End of unit 4	e-Portfolio/Formative
6	Wiki Activity	End of unit 6	Formative
6	e-Portfolio Update	End of unit 6	e-Portfolio/Formative
7 - 9	Collaborative discussion 2	End of unit 9	e-Portfolio
8	e-Portfolio Activity: Research Proposal Outline	End of unit 8	e-Portfolio/Formative
8 - 9	Statistical Worksheet Submissions	End of unit 10	e-Portfolio
12	Self Test Quiz	End of unit 12	Formative

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Looking forward to unit 12 again and how formative feeds into the e portfolio summative :

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End of Module Assignment - Individual e-Portfolio

The final assessment in this module is an e-Portfolio that collates all the evidence of your work in this module and accounts for 40% of the overall module mark. Submit by the end of Unit 12.

Assignment Details

As a learning and development e-Portfolio, specific requirements for what should be included in your e-Portfolio are detailed in the "Module e-Portfolio" section. Elaborating on the requirements and the applicable grading criteria (please see the full outline on the Module Resources page), your e-portfolio should consist of:

- All e-portfolio/reflective activities provided in the module. Aim to showcase at least 1 artefact from each unit. (**Application of Knowledge weighted at 10%, Independent working weighted at 10%**)
- All statistics exercises you have completed throughout this module, including those from the mandatory worksheets in Units 8 and 9. (**Application of Knowledge weighted at 10%**)
- Your evaluation of your Literature Review and Research Proposal submissions (**Independent working weighted at 10%**)
- Reflections on (**Criticality weighted at 40%**):
 - your statistical analysis skills.
 - the research methods process based on your learning in this module
 - the impact on your personal/professional experience based on your completed professional skills matrix and any associated SWOT Analysis and/or Action Plan.

It is expected that reflections will be written as you progress through the module, as listed above. The final reflective piece that you prepare, which might include components of the reflections that you have captured throughout the module is the piece which should be capped at 1,000 words.

You have the option of presenting your reflective piece as a video recording (with subtitles) or as written text. In writing the reflective content, some people find a diary-style approach helps. For example, you can use Rolfe et al.'s (2001) approach. You could start by providing a brief description of the project outcomes or critical incident (WHAT), analyse and interpret the information (SO WHAT) and then decide how you can use the information and learning from it (NOW WHAT). You can find out more about the structure of your reflection by visiting the e-portfolio page on the department site. Please note that your reflections are not seen by other students, so you are free to discuss what is relevant to your learning and the processes you have gone through.

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E-portfolio: generic guidelines

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THIS MODULE

Research Methods and Professional Practice (All programmes)

1. Appraise the professional, legal, social, cultural and ethical issues that affect computing professionals

2. Appraise the principles of academic investigation, applying them to a research topic in the applicable computing field

3. Evaluate critically existing literature, research design and methodology for the chosen topic, including data analysis processes

4. Produce and evaluate critically the resulting research proposal for the chosen topic.

2 Collaborative Discussion Forum Summaries (These will cover learning outcomes 1 and 2).

Reflective Piece This covers a key aim for this module.

The Portfolio should also include the following, as part of professional development aspect of the module:

- Feedback from peers and tutors
- Professional Skills Matrix and action plan (PDP)

Other artefacts developed during the module should be included in the portfolio. These include the **statistical analysis** activities carried out during the module. You will need to describe/show how those artefacts relate to the module learning outcomes.

Skills to be gained here are:

- Time management
- Commercial Awareness
- Critical thinking and analysis
- Decision-making
- Problem-solving
- Initiative
- Entrepreneurial
- Communication and Literacy skills
- Numeracy
- IT and Digital
- Interpersonal
- Critical Reflection
- Research

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Complete overview of ALL formative that feeds into the e-portfolio: Please keep on top of this

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1 - 3	Collaborative discussion 1	End of unit 3	e-Portfolio
1	Reasoning Quiz	End of unit 1	Formative
1	Reflective Activity 1	End of unit 1	e-Portfolio/Formative
4	e-Portfolio Activity: Literature Review Outline	End of unit 4	e-Portfolio/Formative
6	Wiki Activity	End of unit 6	Formative
6	e-Portfolio Update	End of unit 6	e-Portfolio/Formative
7 - 9	Collaborative discussion 2	End of unit 9	e-Portfolio
8	e-Portfolio Activity: Research Proposal Outline	End of unit 8	e-Portfolio/Formative
8 - 9	Statistical Worksheet Submissions	End of unit 10	e-Portfolio
12	Self Test Quiz	End of unit 12	Formative

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Data protection example:

- A patient puts in a subject access request to the NHS [SAR]
- The NHS administrator is unsure which data belongs to whom
- Various doctors/nurses/NHS providers names are on documents
- The administrator contacts the patient who put the SAR in and states records will be released when all data/GDPR rules are checked
- The Data Protection Act of 2018 states that information needs to be used fairly, lawfully and transparently, (Data Protection Act, 2018)



Data protection:

- There are many ethical as well as legal requirements regarding gathering and releasing data. In the case of the SAR request, the data concerning the patient does belong to them, (regardless of whether it is written by a 3rd party).
- The 3rd party can redact their identity regarding a SAR request, (on e mails for example)
- BUT the data written about the patient is their own regardless of who wrote it
- Data protection/GDPR however will not allow personal details of those involved in writing commentary to be released; for example personal addresses...



Data protection:

■ Data protection

- Data should only be used for the specific purpose for which it was gathered in the first place
- individuals have the right to access data held about them
- Data may not be disclosed to third parties without permission of the individual concerned
- If personal data is retained, this data must be appropriately protected, (on a password protected device for example)
- Personal data should be kept for no longer than necessary, (for example at the end of a research study it should be destroyed)



Data protection:

Research participants

- Selection criteria – decide on a demographic specific to the research criteria, and remember the participants and research itself must be without bias
- Consider what consent will be required from participants to take part (or their parents/ carers/guardians)
- Will there be any financial incentive or otherwise to take part (which may affect the objectivity of the results)?
- Remember participants will be able to withdraw at any stage
- Will any deception be involved – for example, intentionally to evaluate a reaction or unintentionally, which might affect the results?



Data protection:

- **Informed consent**

- Anyone you are involving in your research is informed of the research and their role within it and they should be advised that they may withdraw at any time.

- **Vulnerable groups**

- These can include children, pregnant women, people with a mental illness, prisoners, people over 65, people with learning disabilities, (this list is not exhaustive). Anyone classed as vulnerable will have a parent or guardian acting for them. The parent or guardian would have to sign and give consent for a vulnerable individual to engage in research EVEN IF the intended participant has the capacity to sign/agree to engage in a research project.



Looking at impending Literature Review summative deadline:

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Deadline Details

On this page you will find deadline details for when your work needs to be submitted throughout the module. Please note that all deadlines are in UK time.

The units should be completed in order, by the date indicated. These deadlines will also appear in your Moodle calendar.

Please Note: All grades are subject to change until they have been agreed by the External Examiner and ratified by the Examination Board.

Submission Guidelines for Assignments

Please review our [Submission and Editorial Guidelines for UoEO Assignments](#) before submitting any assignment.

Unit	Component	Deadline
7	Literature Review	23:55 hrs Monday 25th April 2022
10	Research Proposal Presentation	23:55 hrs Monday 16th May 2022
12	Individual Module e-Portfolio	23:55 hrs Monday 30th May 2022

Please note that the UK will move from GMT to BST on Sunday 27th March 2022.

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Re-cap : Developing a Literature Review

An effective Literature Review incorporates:

- A focused approach to research
- The ability to identify cross-sectional research [for example: mixing the old with the new]
- Contemporary literature should come from publications ideally within the last 6 years and no older than 10-15yrs [maximum]
- Literature review must be based in deep research and not opinion
- You must be able to dissect your research and analyse and evaluate that research
- Remember that academic writing is grounded in debate and discussion, [looking at the pros and cons of discussion]
- Keep writing academic, concise, logical and focused, [don't indulge in wordy and emotive writing styles]
- Your writing should show a good and intrinsic knowledge of your subject



Re-cap : Developing a Literature Review

A Literature review should:

- Show clarity when looking at and answering the research problem
- Develop your research methodology
- Develop your existing knowledge of a topic
- Fully contextualise your research findings



Recap : Developing a Literature Review: Academic conventions

- Please complete the Literature Review on a word document and consider academically appropriate professional presentation when completing this, for example:
- Putting your name, student number, where you are studying, the module your are studying on a title page and the unit you are responding to
- Contents page
- Use Arial font size 12
- Double line spacing
- Margin indentations should be approx. 2.5cm on either side
- Use regular citation
- Apply a list of references at the end of your Literature Review
- Ensure paragraphs are evenly weighted
- Ensure that syntax is academic and concise [use word count wisely]
- Take a critical approach to content [don't be overly descriptive or subjective in your opinion]
- Ensure that all research is paraphrased away from the original source – consider Turnitin content matches



What makes a good Literature Review?:

- Literature reviews allow you to investigate:
- What has already be found [investigated] in a research topic
- This then gives the 'author' of the Literature Review knowledge regarding what already exists in their chosen topic
- This means it is clear where 'gaps' in research may be, and then what type of research or investigation will fill these gaps
- In summary it allows you understand what is unknown in your chosen topic after investigating research and data that is already published regarding your topic...



What makes a good Literature Review?:

- As discussed in seminar 2 we are not looking for lists or literal interpretations of research
- The Literature Review should look at a good and extensive cross-section of research linked to the topic, [both old and new]
- The LR should evaluate and analyse research from different points of view, [from bona fide research]
- You should draw conclusions from your research by looking at the pros and cons of discussion and remaining objective yourself
- If you start your research from the perspective of a biased or subjective opinion [i.e: already assuming what the outcomes will be to suit a personal conscious or unconscious bias on the subject] this *will* show in the manner in which you interpret your research
- You should enter any research topic without bias or without pre-conceived ideas...
- The Literature review should show the ability to synthesise discussion and should show an intrinsic understanding of the topic, [via in-depth, cross-sectional, unbiased research]



What makes a good Literature Review?:

- A Literature Review must:
- Cite
- Compare
- Contrast
- Critique
- Connect

Your discussion and research

Unit 2: Research Questions, the Literature review Guide Questions:

Unit 2 - Literature review guide questions (1) • Saved to this PC

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WRITING A LITERATURE REVIEW

Guiding questions to support planning, revising, and refining of a *literature review* *

1. What is the focus and aim of your review? Who is your audience?

2. Why is there a need for your review? Why is it significant?

3. What is the context of the topic or issue? What perspective do you take? What framework do you use to synthesise the literature?

4. How did you locate and select sources for inclusion in the review?

5. How is your review structured?

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Looking forward to Units 7,8 and 9:

Looking forward to seminar 4:

- Prepare for the next seminar session by attempting the worksheets on hypothesis testing and summary measures, available in Unit 8.
- Collaborative Learning Discussion 2
- **This formative discussion will last for 3 weeks.**
- Week 7: initial post.
- Week 8: at least 2 peer responses.
- Week 9: and then a summary response.



List of references: Unit 5

Essential Reading

Dawson, C. (2015) *Projects in Computing and Information Systems: A Student's Guide*. Harlow: Pearson.

- Chapter 2 Section 2.4.2 p 29.
- Chapter 2 Section 2.4.3 p 29-31.

Berenson, L., Levine, D. & Szabat, K. (2015) *Basic Business Statistics: Concepts and Applications*. 13th Ed. Pearson

- Chapter 7 Section 7.1 p 280-284.
- Chapter 7 Section 7.2 p 285-287.

Confessore, N. (2018) *Cambridge Analytica and Facebook: The Scandal and the Fallout So Far*.

Additional Reading

Campos, D. (2015) *Populations vs Samples*.



List of references: Unit 6

Essential Reading

Dawson, C. (2015) *Projects in Computing and Information Systems: A Student's Guide*. Harlow: Pearson.

- Chapter 2 Section 2.4.4 p 31-37.

Additional Reading

Brace, I. (2013) *Questionnaire Design: How to Plan, Structure and Write a Survey*. Kogan Page.

- Chapter 1 p 6-16.
- Chapter 3 p 28-3.
- Chapter 4 p 36-47.

Sage Video (2018) *Designing a Survey*.

QuestionPro (2021) *Questionnaire vs Survey: Is there a Difference?*

Survey Monkey (n.d.) *Survey vs Questionnaire: What is the difference?*

QuestionPro (2021) *Leading Questions: Definitions, Characteristics and Examples*.



Questions?

