MONASH University

Studio Guide

Faculty of Information Technology

Research Methods for IT

Week 1 - Why do we need Research Methods for IT?

Workshop Activities

There are 3 activities in this workshop (one on each page):

- Activity 1: Understanding People
- Activity 2: Understanding a System
- Activity 3: Communicating your results

In this workshop you will work through a case study based on a real-world industry scenario. Each of the activities will take you through the key steps of performing research within the scenario. The workshop is designed to introduce you to how research methods are commonly used within the IT sector, and how these processes map to the research methods that you will cover during this unit.

The weekly assessment task which contributes to your assignment can be found on the Moodle Assessments page.

- Before the studio, each week you should study the videos, review the slides, transcript and the readings provided. Complete the weekly quiz which is worth 5% of your total marks.
- There is a participation activity related to your participation in the activity for the week related on Moodle over the 12 weeks this will be worth 5%.

During the studio you will work in small groups to complete the activities. You should aim to spend the allotted time in the studio working on the activity (and writing notes) in your groups, and then reviewing with a larger group. You should record your notes on the activity in the worksheet provided.

Case Study Context
OnStudent Feature Development

OnStudent is an IT company that provides an integrated management system for universities to managing contact with new students throughout their application and arrival at university. Their flagship product (also called "OnStudent") is in use by a number of major universities across the southern hemisphere, and their product is well respected by the university sector. The product manages a number of interactions between the university and arriving students: providing a knowledge base the student can access about their arrival; course selection; visa and accommodation services and IT services.

A year ago, the CEO pushed the company to focus on student engagement through social media for the next generation of their platform. This has involved moving the primary mode of communication with students from email to social media accounts. Their new version of this social media based product is in use by 20% of their clients.

As part of the yearly product update, the CEO wants to connect a student's family in a more meaningful way into the student on-boarding process to a university.

One of your roles within the company is to conduct research around potential new features to the companies products and advising internal product teams on your findings. You are tasked with understanding how family engagement should be introduced into the product.

Activity 1
Understanding People

Work in groups, then review as a larger group with you tutor

As an initial activity, you need to understand how students engage with their families as part of the existing on-boarding process provided by OnStudent. This is key data for understanding what any new features should be doing, and how potential users will interact with them.

This will involve interviewing students who have used the current version of the OnStudent platform in their application to university, to find out how this new feature may affect their experience.

In your groups

1. Decide on the following:

   - Who will you interview?
   - Where will you recruit these participants from?
   - How many participants will you need to interview?
   - How long should these interviews last?

2. Decide on three key points that you would want to find out from interviewing each student

3. Decide what method you will use to get knowledge from these interviews, so that the results can be presented in a report.

⚐ *Make notes on your shared worksheet.*

On return to the main session

Review with your tutor and the larger group.

Take a 10-minute break! (before the next activity)

Activity 2
Understanding a System

Work in groups, then review as a larger group with your tutor

It turns out that a product development team in the company has already implemented a prototype feature into the platform to engage families in the student onboarding process. They have built the system after a short internal brainstorming process, and have not tested it externally yet.

Specifically, this new feature matches the family members of different students together based on their demographic profile, allowing them to chat, and share their experiences via the OnStudent platform.

Before moving forward with the project, the CEO wants to know what effect this new feature might have on the onboarding process for students using the product. In particular, there is concern that introducing families to the communication process between the student and the university will change **how** and **when** the student engages with the platform. The platform collects detailed logs of all interactions in the platform.

Available logs include:

- Timestamps of any communication between the student, the university and any family members
- Demographic profiles of family members, including their location, ethnicity, income range and age range
- Content of any messages sent between the university, student or family members

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In your groups

⚐ *Make notes on your shared worksheet.*

1. Design a way to show if the prototype feature has an **impact** on communication between students and the university, when compared to the existing version of the product. What is the impact you are looking for?

2. Consider the following:

   - What data captured by the system will you use to demonstrate this impact?
   - How will you show this impact using the above data?
   - What **tests** or **processes** will you need to perform on the data to demonstrate the impact?

3. After you receive some test data from the development team, you notice that some of the data logged by the system has some issues. The timestamps of interactions are actually captured incorrectly 20% of the time, with no way to reconstruct the data.

   - How will this affect your analysis of the data?
   - How might you mitigate this?

4. The development team has time to build 1 more logging metric into the feature before testing, decide what you want them to include, and why this will help you better calculate the impact the feature is having.

On return to the main session

Review your answers with your tutor and the larger group.

Take a 10-minute break! (before the next activity)

Activity 3
Communicating your results

Work in groups, then review as a larger group with you tutor

Small scale testing of the new feature was conducted with some of OnStudent's clients. Initial results suggest that the new feature as it is implemented is reducing student's engagement with the university, resulting in more complaints from students about the process.

However, based on the interviews you conducted, your team have a different proposal:

> ⚑ *Rather than family members be allocated automatically in the platform, your team proposes that family members of students who are already at university volunteer to become 'mentors' to incoming student's and their families. Mentors will be matched with multiple incoming students, based on their native language and timezone. Mentors will go through some basic training in how to engage with students and their families over the platform.*

You have been asked to communicate this new feature to the internal product review team. If successful, this will result in an external company developing the feature.

Since these two teams are based in different locations, company policy is that you produce a 2 minute video summarising the feature that can be shared with both the internal review team, and the external company. Your video will need to communicate:

- A summary of the interview data that informed it's development
- The reason why this feature has been proposed.
- How this feature will improve the student experience of the platform.

In your groups

⚑ *Make notes on your shared worksheet.*

1. As a group, propose a structure for your 2 minute video.

2. Describe how you will present the qualitative data that is behind this new feature.

3. Consider and note down:

   - What visuals will you use to augment the content?
   - What level of technical detail will you be going into?
   - How might you create this content (e.g. software, how to get content)

On return to the main session

Review you answers with your tutor and the larger group.