FIT2001: Systems Development
Workshop 4 – Suggested Solutions

Objectives:

- Understand and practise how to investigate and validate the requirements
- Understand the requirements for Assignment 1
- Start planning for Assignment 1

The following activities are involved in this workshop:
- Activity 1: Review QUIZ (via Flux)
- Activity 2: Gathering Requirements Techniques
- Activity 3: Interview practice
- Activity 4: Assignment 1 Discussion
- Workshop Quiz (happen at various time each week)

Activity 2: Gathering Requirements Techniques (~35 mins)

- Task: Bayside Bikes - You need to start gathering information about the requirements for Bayside Bikes new system. For each of the following scenarios, select the best data gathering technique and discuss why you chose the technique, and why other techniques were not suitable. (~ 20 minutes)
  1. You want to know how customers of Bayside Bikes would rate their service on a scale from Poor to Excellent
  2. You want detailed information about the rental process, and all the pain points of the process
  3. You are keen to understand all the data that is current captured in the manual system when a booking is done
  4. You have spoken to staff, but you are still confused by the pick up process -when a client comes to pick up their bike, so you are keen to get a clearer understanding.

A2 Discussion:

1. **You want to know how customers of Bayside Bikes would rate their service on a scale from Poor to Excellent**

Questionnaire *would be the best to get this type of information as Bayside customers are widely dispersed, and the type of information required is a rating, rather than requesting detailed information.*

Pros	Cons
• Standardization – collecting the same type of information from all • Ease of data collection with a large group • Ease of administration and easily accessible - can be deployed via many online channels like web, mobile, email, etc. • Ability to tap the "unseen" • Suitability for statistical analysis • Can pick up on subgroup differences • Can be inexpensive compared to other methods • Sample can be used to extrapolate information about the general population • A wide range of data types can be collected such as attitudes, opinions, values, etc. • Usefulness enhances if combined with other methods, i.e., observation or interview • Can be anonymous	• Samples must be carefully selected to ensure statistical meaning. • Difficult to gather further information - Without someone to explain, participants may have **different interpretations** of the questions • Subject to misinterpretation, depending on how questions are designed and asked • Answers may be dishonest or the respondents lose interest midway. • Respondents may have a hidden agenda, and may mislead • If not mandatory, could have a poor response rate • Cannot pick up on body language cues - cannot fully capture emotions and feelings.

2. **You want detailed information about the rental process, and all the pain points of the process**

Interview *would be the best because you want detailed information about the process, and it will be easier to discuss difficulties with the process face-to-face. You could also add* ***Observation*** *to assist with developing your understanding of the rental process, by observing how staff actually do it on the ground.*

Pros	Cons
• Allows for clarification – can ask follow up questions • High response rate • Able to gather in-depth information and to pursue hunches • Can tailor the line of discussion to the individual • Easier to reach those who are considered unreachable (the poor, homeless, high status, mobile, etc.) • May be easier to reach specific individuals (i.e., community leaders, etc.) • More personalized approach • Easier to ask open-ended questions, use probes and pick up on nonverbal cues - tone, voice, and word choices to gain a deeper understanding.	• Reactive effect: interviewer's presence and characteristics may bias results • Expensive and time consuming – time of interviewer and interviewee, transcription and analysis/reporting • Requires strong interviewing skills to get good data • Slowest method of data collection and analysis • Responses may be less honest and thoughtful • Respondents who prefer anonymity may be inhibited by personal approach • May reach only a smaller sample • Difficult to analyse and quantify results

3. **You are keen to understand all the data that is current captured in the manual system when a booking is done**

Review existing forms *would be the best way of getting this data. Looking at the completed booking forms would not only show you what data they expect to capture but also what data they did actually capture.*

Pros	Cons
• Accuracy is potentially high • Ease of data collection - the data already exists and no additional effort is needed • No need of searching and motivating people to participate • Allows you to track changes over a period of time	• Problems with evaluating the data • Difficulty in understanding without the ability to ask questions • Information may be out of date or irrelevant • Can be time-consuming.

4. You have spoken to staff, but you are still confused by the pick up process -when a client comes to pick up their bike, so you are keen to get a clearer understanding.

Observation *would be a great way of understanding the pick up process as a starting point, which could be supplemented by an* ***Interview*** *for follow up questions.*

Pros	Cons
• Simple to collect data as observation does not require specialist skills • Allows for a detailed description of behaviours and events. • Greater accuracy as observer can view participants in their natural environment and directly check their behaviour. Beware of Hawthorne effect. • Not dependent on people's willingness to report - some respondents don't want to speak about themselves or don't have time for that.	• Some phenomena aren't open to observation e.g. cannot study attitudes • Hawthorne effect / Bias. • Time consuming/expensive to administer. • Its validity cannot be predicted accurately. • Cannot study attitudes and opinions by observing. • The personal view of the observer can be an obstacle to making valid conclusions. • Situations of the past cannot be studied. • Not realistic for use with large groups

NOTE*: A combination of methods is often used, to get a complete picture of the current system and the new requirements.*

Activity 3: Interview practice (~65 mins)

- Work with your Assignment Team members to participate in a 'requirements gathering' interview. **After the interview, your team discusses: (~10-15 minutes)**
    - Did the interviewer get a good understanding of the system? How much of the information was NOT requested/given? Highlight the information not requested/given.
    - What could have gone wrong in the project due to this missing information?
    - What sorts of questions would have helped get the information?
    - Was the interview successful? What was good? What could be improved?
    - Was the persona of this client handled successfully? What strategies were used? What strategies could be used in future when facing a similar type of client?
    - What are the main functional areas of the system?

A3 Discussion:

Some possible questions for the Interview:

Students should have tried to identify key functional areas from the brief project description. They should then start with broad questions, followed by more detailed question.

- Introduction
- Can you tell us a little bit about the Rentals side of your business?
- What are the main processes that you carry out?
- How do people book a rental?
- If they walk in – what are the processes?
- If they ring – what are the processes?
- What information do you require when they make a booking request? Where do you store the booking information? Can we please have a copy of the booking form – a completed one if possible. Do you use any other forms? Can we have copies of those as well please?
- Do you ask for a deposit at the time of the booking? What payment methods do you accept?
- Can they cancel a booking? Are there any charges if they cancel the booking?
- Is there a standard rate for all types of bookings? If there are different rates – what are they?
- Do you collect any further when they come and pick up the bikes? What sort of information?
- Once the customers go on their bike ride, does anyone not return – do they just steal the bikes? What do you then?
- You said you wanted to automate the bike service processes, can you tell us a little bit about what happens currently with this process?

Feedback from past interviews

What we expect from a good interview:

- Prepared and organised interviewers – sent agenda, reminder and minutes to client.
- Polite and professional interviewers
- Asked permission to record the interview
- React appropriately to the 'type' of client – role played by tutor
- Arrived on time, Kept track of time, and finished the interview on time.
- Interviewers introduce themselves, outline their plan and proceed to interview the client in a professional manner.
- Well-structured, relevant agenda
- Good summary of what the client says, to ensure that they understood the requirements.
- Explanation of technical terms used
- Participation by all team members. Different interviewers asking questions relating to different aspects of the functionality.
- Listening carefully to answers from the client, and following up with related, relevant questions.
- Well thought out questions, where the client has been considered

Interview aspects that can be problematic:

- Confusing questions
- Interviewers not actively listening
- Showing no interest when other interviewers are asking questions
- Focussing only on the list of prepared interview questions, to the point that even if the client says things that makes questions invalid, these are still asked because of the focus on the next listed question.
- Not keeping track of time, so unable to ask all questions.
- Asking the same question by more than one interviewer, or asking questions because they are on the list, even if the client has answered them as part of another question (poor listening).
- Not thinking broadly about the questions … e.g. possible exception / error situations.
- Too much focus on the current system and technical requirements e.g. Where would you like the database to reside rather than the new system requirements
- The use of the generic agendas from the text, rather than creating an agenda relevant to the case. can lead to an interview that does not flow well.
- Uneven contribution from interviewers – for the Assignment it is expected that all students contribute actively to the interview