Requirement Elicitation Plan - Group 4

Questionnaires:

Elicitation Objectives

The primary goal of using a questionnaire in the requirements elicitation phase is to develop a greater understanding of the needs and desires of the userbase i.e. the students, by polling a relatively large sample of the population. This will ensure that the final product reflects and meets the requirements of the favoured users.

Elicitation strategy and planned techniques

A questionnaire could be easily created and distributed through an online resource. Electronic questionnaires are able to be quickly distributed to a large population, as they can be sent via email. By using a large sample size the data collected is more representative of the population, as the effect of outlying data is minimised. In addition, the use of an electronic questionnaire makes it easier to analyse the data, as the data can be collected and categorized automatically e.g. seeing what percentage of polled results want a certain feature, thus reducing the workload required in compiling and analysing the data.

Schedule and resources estimates

The questionnaire should be active for as long as possible, allowing for students to answer the question without restraint, thus collecting a larger data size. An online questionnaire would be advantageous, allowing students accessibility from the beginning of the project and guaranteeing consideration of their input. For an online survey, the resources should be minimal; a single server should be able to hold all of the results.

Documents and systems needed

A pre-existing online tool could be used to conduct the questionnaire. Furthermore, programs, such as excel, should be utilised by the analysis to turn the data into visual representations, e.g. graphs, charts. Questionnaires are not a resource intensive technique and overall are cost and time effective to the project.

Expected products of elicitation efforts

The expected product of the questionnaire will be a collection of numerical and graphical data, which will represent the responses of the student body regarding desires for certain features. This data will be used to develop project requirements, ensuring that the project will satisfy the needs of the users.

Elicitation risks

A risk with questionnaires is that the data collected is quantitative data, which is unable to represent thought processes of respondents. Thus, care must be taken to not just look at the raw data, but to understand what it actually represents. Free text responses could also be included, which would allow for more diverse responses and qualitative data. This could also result in features and ideas that the developers did not initially consider. Another concern is the submission of false results and multiple submissions which would skew the data gathered. The issue with multiple submissions could be circumvented by requiring a university email for submission, allowing for easy identification of multiple submissions and making it harder to spoof multiple emails. The construction of the questions is also an area where much care should be taken; the wording of a survey can influence the choices of the respondee, as can the style of response option chosen i.e. Likert vs. a binary yes/no.

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Systems interface analysis:

Elicitation Objectives: By conducting a systems interface analysis, developers determine how their software will interact and integrate with existing connecting software systems. Identifying functionality of interfacing systems allows the developers to identify requirements for their system, as well as, any existing functionalities that they do not need to implement in their own software. Consequently, the analysis will be able to easily identify functional and domain requirements. For instance, data requirements, service exchange requirements and validation criteria.

Elicitation strategy and planned techniques: Before conducting the elicitation, a straw man model should be established. This model will serve as a starting point and a reference to what the system is expected to produce. Next a context diagram would be created, based on the documentation of the system. This would show the expected chain of events that the system works through, allowing a more complex understanding of the system and its potential for integration with the new project. This process should involve the careful analysis of the system step by step, and then documenting the findings. This documentation would take the form of diagrams and ecosystem maps.

Schedule and resources estimates: Typically, a systems interface analysis requires a larger amount of time when compared to other elicitation techniques. This is because each interacting system needs to be thoroughly analysed and documented, with any possible functionalities, requirements or interactions identified. As student life will be a university application the analysts should not run into issues with gaining access to these other university systems.

Documents and systems needed: In order to complete systems interface analysis elicitation, access to the interacting systems are needed. For the student life application this will be systems such as canvas, the university library, and any other university systems. These systems should also have documentation that explains their workings, results, and implementation. This must be provided in addition to the systems themselves, or else the analyst would need to fully analyse the system themselves, prior to any further work.

Expected products of elicitation efforts: It is expected that the elicitation will result in the construction of context models and ecosystem maps. This will allow for easier understanding of the data passing through the various interfaces and gives the developers a reference to look to during the design process. These models can then be used to derive further diagrams for a more detailed analysis.

Elicitation risks: A major risk of system interface analysis is that you cannot identify the needs and requirements of the favoured user class and stakeholders. This is because you are not communicating with users and stakeholders about their requirements. However, this risk can be mitigated by completing multiple elicitation techniques, such as questionnaires and interviews, in conjunction with systems interface analysis. There could also be issues with the documentation provided. If the documentation is inaccurate, or outdated, then potentially the analysts may need to conduct a more thorough analysis of the system, which would take more time and resources.