User Responses Of The Development Of Language Laboratory System

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Article Info	Abstract:
	The data collection of room loans, inventory, and books is an important activity as a means of documentation at the language laboratory of Del Institute of Technology. Using manual process of the borrowing and data collection, possibility of data loss may occur. Moreover, it is also laborious and inefficient in terms of time. An information system is designed to improve the existing manual system in a computerized way that it can be accessed via desktop or mobile. Using agile software in the development the information system, the application can provide complete and efficient loan information stored in a database server. Based on the user responses, the system is built in a more effective, simpler, faster, and a more structurized way. Keyword: *user responses, system development, language laboratory, borrowing application*

INTRODUCTION

Language laboratory is a room that is widely used by students particularly for language learning in a school or an institution. Nowadays, language laboratory has varied functions besides as room for listening practice. The room is also functioned as reading room and storage of inventory related to language learning such as dictionaries, listening devices and other language-learning related tools. Moreover, the room itself can also be used as individual learning for some standardized English test. In Del Institute of Technology, language laboratory is managed by unit called UPT Bahasa (Unit of Language).

In the current system, UPT Bahasa still uses the manual method of data collection of books, inventory, and use of room as a language laboratory, resulting in inefficiencies in time a look of security in data storage. Students and lecturers must register themselves in the log activity provided. Every lecturer and student who borrows and uses the room must first confirm with the head of UPT. The data of borrowers and users of room will be added to a folder containing is evidence of users and borrows which can be lost if not properly stored.

Therefore, it is necessary to develop a language laboratory information system that will be built is a system that can hold book, inventory and room data. In this information system there are many functions that can save time and avoid losing books and inventory from the room which can result in data loss. But now in the function of managing book data, room inventory and use, the head of UPT only needs to fill in the book data, inventory, and use of space into the information system and minimize data loss. If the data is written in a book, then if the data is difficult to find again with the search function, the book data, inventory, and use of the room will easy to find.

In the previous research, the result is with a web-based car rental management information system could improve the time efficiency of rental history data transmission after using this application. Data storage which is already computerized will ease the process for the company in the data storage, and data processing process (Sastikar, 2018). With the design of a new web-based system developed, the data needed is stored in a centralized system database that is expected to facilitate the search and processing of data and it makes it easier for operators to do the recording and searching (Gumilar et al., 2013). The designation of usability as a less important NFR impacts the design because a reduced focus on user-centeredness' creates systems acceptance problems, necessitates rework and negatively impacts end-user experience (Adikari et al., 2009). The result is Information systems for borrowing assets can help administration work become easier and company asset data become more computerized (Yusuf, 2017).

Many previous pieces of research have discussed on how to develop an online booking system, for example, (Sastikar, 2018), (Yusuf, 2017), yet few pieces of research discussed on the responses from users on the online system, for example (Gumilar et al., 2013), and (Adikari et al., 2009). This paper aims at showing the response from the users on the efficiency of borrower data storage from the system development of the language laboratory, by first making a user interface that suitable to the user of the system. The previous research has gaps with the data storage on their project. In the language laboratory, the manual system using paper makes it time-consuming to know who uses the facilities over there.

RESEARCH METHODOLOGY

The method used in this research is an agile software development and the methodology for data collection used qualitative methodology by giving a questionnaire to the user who uses the language laboratory. This methodology was used quite popularly to develop software faster, incrementally, and to produce satisfied customers (Chita, 2018). For the improvement in the quality of software products, the agile method for software development has been adopted by many organizations to sustain in the market. Evaluating agile methodologies against main quality factors acts as a tool for studying quality in agile techniques. By analyzing the requirement for each user, this methodology very simple and commonly used (Sagheer et al., 2015). The Agile development methodologies are used in organizations where there is no requirement freezing, an incremental and iterative approach is used for modeling and everyone in the team is an active participant and everyone's input is welcome (De Lucia & Qusef, 2010). Users have an important role in developing web applications. The user and the development team work together in developing the right application. For knowing user requirements, the developer collected data in the form of a questionnaire that was distributed to all users. The data collection stage of the qualitative research questionnaire the developer may be able to successfully analyze the data collected clearly (Anyan, 2013). This questionnaire asked about the user's understanding of the efficiency of borrowing room, inventory, and books. The developers show the user interface that suitable for the user of this system. It is important to create user interfaces that are simple, user-friendly and efficient for the required functions, and knowing the opinion from users is also necessity of evaluation as discussed by Pasaribu (2019). Participants were 46 students and

lecturers who experienced using the language laboratory for studying. By using questionnaire, the user become the user-centered design and priority to build the product for language laboratory information system.

RESULT AND DISCUSION

In the current system, UPT still uses the manual method of data collection of books, inventory, and use of the room as a language laboratory, resulting in inefficiencies in time a look of security in data storage. Students and lecturers who want to use room, borrow books and inventory must register themselves in the log activity provided, and must first confirm with the head of the unit. The data of borrowers and users of the room which has been added to the book is evidence of users and can be lost if not properly stored. For solving the difficulties experienced in the process of storing data borrowing books, inventory, and room, the language lab information system will help to facilitate the head of UPT, lecturers, and students. To find out the requirement of users, developers use agile software development which includes users as an important role in building systems. Agile software development that can adapt to changes needed by the user, it will make it easier for developers to know the system requirements. Based on the methodology section, data collection about user requirements, the developer uses questionnaires in the form of qualitative questions. This methodology is used to find out the extent to which users carry out the process of borrowing books, inventory, and room according to borrowing procedures.

The following are the results of the questionnaire that were answered by the system target user:

1. Respondents were asked on their experience on using the laboratory facility other than using the laboratory for studying. From 46 respondents, 69.6% saying they had never borrowed and 30.4% had ever len
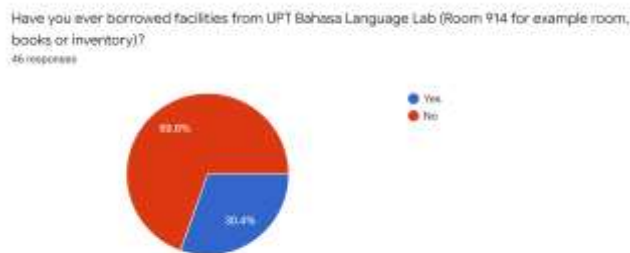

Figure 1. Language laboratory facilities usage

2. On the second question, developer asked users on how they know about the items that they want to use. 58.1% mentioned that they went for a checking in the laboratory, and 41.9% asked to the head of UPT directly
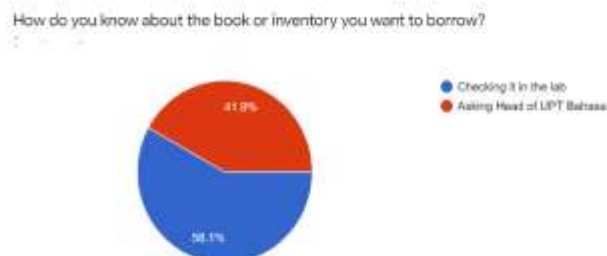

Figure 2. Booking Procedures

3. Next question is related to how easy it is to borrow the language laboratory facilities on

the current system. 13.3% of them said it was difficult, 40% of 30 responses said it was easy, and 46.7% of the systems that were running at this time were not too easy to use.
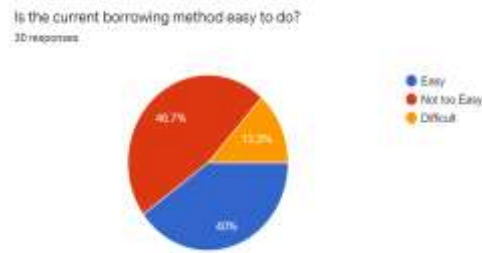

Figure 6. Booking Procedures

In the comments, users also mentioned some of the difficulties faced when doing booking such as the lack of automatic reminder for the last date of borrowing, no such notification on the availability of the items, and the laborious process.

DISCUSSION

The aim of this research is to show the response from the users on the efficiency of borrower data storage from the development of the language laboratory system. The quality of the website the user experience that is short but still reliable, and to begin to construct secure storage (Sauro, 2015).

Based on the result of questionnaire, it can be concluded that the problems when borrowing experienced by students and lecturers are the same. From the problems, the development team developed a website on the language laboratory. The information provided room search features, inventory, books in the room and provided the status of each items be borrowed whether it is available or not available. This website also provided functions for booking the room, borrowing books, and inventory. Data on the status of rooms, books, and inventory is obtained from data managed by the head of UPT. The appearance of the room, books, and inventory available can be seen in the following figure:

Figure 3 Layout Booking Room

Room Borrower parameters consist of:
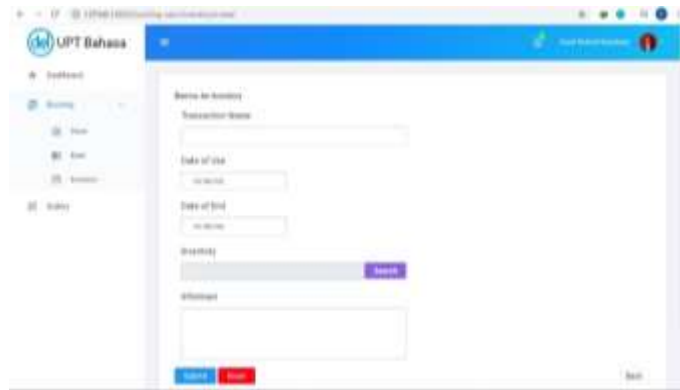1. Borrower's name
2. Date of use
3. End date

Figure 4 Layout Booking Inventory

Inventory borrower parameters consist of:
1. Name of inventory
2. Borrower's name
3. Date of use
4. End date

Figure 5 Layout Booking Books

Book borrower parameters consist of:
1. Title of book
2. Borrower's name
3. Date of use
4. End date

Based on the user interface that has been shown to the user, there are 56.5% agree that the layout and background picture needs to be improved based on the user interface and the rest of them agree that the function, size font, and color needs to be improved also.

These user responses are useful for improving the information system as the development of the application is merely based on the needs of the users.
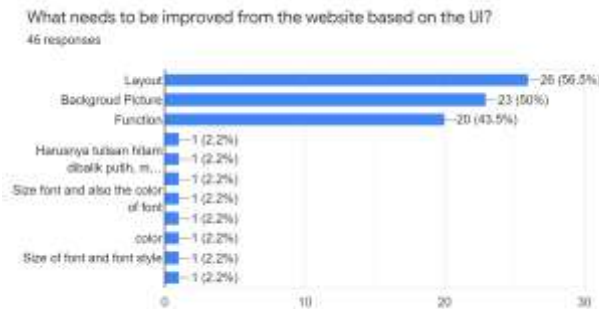
Figure 7. Users responses

CONCLUSION

IT Del language laboratory is a room used in the lecture process. In the language laboratory there are also several aspects that support the lecture process, including some books, inventory, or the use of space for student for self-learning process. In this case, there are obstacles in using the facility that is in the case of borrowing or using some books, inventory and the room. Language laboratory information system has been developed to solve this obstacle. User response was conducted in order to understand the feedback of the information system built, and used for the improvement of information system developed.

Further study on developing a better information system can focus more on the process on step-by-step process on the information system constructed. Also, during the development of the application, agile software development was used. Future research may investigate the use of other software used for the development of the information system.

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