

Need Analysis for Learning Journals App to Identify Learning Styles

Syafril; Ulfia Rahmi; Aina Almardiyah

Educational Technology, Faculty of Education, Universitas Negeri Padang
syafril@fip.unp.ac.id; ulfia@fip.unp.ac.id; aina.almardiyah22@gmail.com

Abstract

This study is purposed to estimate the proportion of students' needs for a learning journal application that can detect learning styles. Learning styles can optimize learning achievement because individuals can learn in the right way with their learning styles. Learning journal applications can be used daily by students related to learning activities and provide recommendations on how to learn in order to improve student skills. This study presents the results of a needs analysis of the learning journal. This research is a descriptive research. Data was collected by using a questionnaire that revealed the need for a) learning journal, b) learning style, and c) application of learning journals distributed randomly to students at Universitas Negeri Padang. The results show that students' need a mobile application that can help them uncover learning styles and expect recommendations from the application.

Keywords: *blended learning, learning styles, mobile learning, learning journals, learning how to learn,*

I. INTRODUCTION

In the era of the Industrial Revolution 4.0, the use of technology is crucial to everyday life that is useful to facilitate human work, in accordance with the initial goal of technology. The use of technology in learning becomes an important key in building the quality of human resources. The use of technology in learning: (1) as a tool or medium of learning and most important thing is to use it appropriately, as it can increase students' interest in the lessons they are currently studying (Rahmi & Helsa, 2018), (2) as a means/place of learning, (3) as a source of learning, and (4) as a means of enhancing the professionalism (Nasrulloh & Ismail, 2017).

Information and Communication Technology (ICT) is flexible in daily use and is one of the answers in the modern era. Many things are currently easily to reach via smartphone. For example, shopping, discussions, transactions, learning resources or anything else has been done online and reached with a smartphone that is in your hands. So, humans today are very dependent on smartphones (Hafni, 2019). Basically, the use of smartphones can facilitate daily activities, including learning. The learning process can be supported by the technology of smartphones or other devices not limited time and space. The utilization of such technology in learning is often referred to as mobile learning (Crompton & Burke, 2017; Huda, Mulyono, Rosyida, & Wardono, 2019). Students are learners who are using smartphones in the learning process either in the classroom or self-learning.

Mobile Learning is instructional design that can be done anywhere, anytime and by anyone to facilitate students to acquire knowledge or skills (Huda et al., 2019). Mobile learning existence is learning facilities and provides opportunities for students to relearn that has not been understood, wherever and whenever (Chaniago, 2019). Consequently, the mobile learning technology is a potential for students to improve their knowledge, skills and learning performance in informal manner (through communication technologies (Camilleri & Camilleri, 2019). One of the activities in mobile learning is a learning journal application based android. Learning journals are applications or software to record ideas, thoughts and personal experiences, such as reflections and views of students in the learning process. The learning journal can be used as a measurement tool. The results of measurements from the learning journal can encourage reflection and independent learning and give the user the responsibility to record daily activities and thoughts related to lecture activities (Andriyani, 2017), so that, the use of learning journals can help students to self-learning (Rahmi, Syafril, Azman, & Azrul, 2017) self-learning is a process carried out in taking initiative, with or without the help of others, in diagnosing their learning needs, formulate learning goals, identify human and material resources for learning, choose to apply appropriate learning strategies, and evaluate learning outcomes (Cazan and Schiopca, 2013) in (Hidayati & Rahmatan, 2018). To improve their Self-learning skills is to write learning journals (Hidayati & Rahmatan, 2018). So, this research aims to estimate the proportion of student needs for a learning journal application that can detect learning styles. Learning styles can optimize learning outcomes because individuals can learn in the right way with their learning styles. Learning journal applications can be used daily by students related to learning activities and provide recommendations on how to learn.

II. METHOD

This type of research is quantitative descriptive. Data was collected by distributing questionnaires to students at Universitas Negeri Padang (UNP) in the January semester of June 2019. Distribution of questionnaires was done randomly for all students with the entry year 2015-2018. Questionnaire has 2 scales, namely Yes or No, the questionnaire reveals the influence of learning styles on learning outcomes, student difficulties in writing learning processes and identifies how important the use of mobile applications for learning needs. The data obtained were analyzed descriptively to reveal the tendency of students' needs towards the application of learning journals. Descriptive data analysis technique is a technique to reveal and explain the opinions of respondents based on the answers to the instruments proposed by researchers.

III. RESULT AND DISCUSSION

In this research, it was based on data collected through questionnaires distributed to students in the UNP environment to analyze the needs of application-based learning learning journals. There were 147 UNP students who participated in this study. This study discusses the needs of students for the use of learning journal applications.

In this research, UNP students, 84% of 147 answered that maximum learning outcomes were obtained by using learning styles that were in accordance with themselves and the rest answered no as can be seen in chart 1. Using appropriate learning styles can improve learning optimization. This is confirmed by the results of Tanta's research (2010: 13) stating "that learning styles influence learning outcomes by 73% while the remaining 27% is influenced by other factors" (Nugroho & Sudarma, 2017).

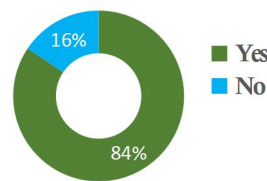


Chart 1. The answers result about the effect of learning styles on learning outcomes.

In the next question about difficulties writing the learning process in a learning journal. There were 65% of 147 answering difficulties in writing their learning process and the rest had no difficulty. Writing learning processes in learning journals is an important activity because by writing students get information about the learning styles used. Writing is a creative process of moving ideas into writing symbols (Marianita & Artati, 2018).

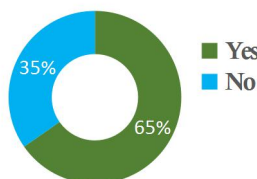


Chart 2. The answers result about the difficulty of writing the learning process in learning journal.

On the next question regarding the use of mobile applications for learning purposes. Most of the UNP Students tend to use the mobile application in the learning process, as can be seen in chart 3. Students UNP use mobile applications for smartphones powered by possession and university facilities such as the internet facilitate students accessing mobile applications.

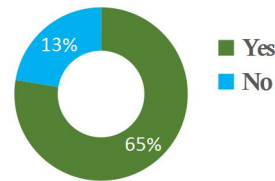


Chart 3. The answer results about the role of mobile applications for learning

From the data obtained, UNP students need learning support facilities such as learning journal applications. The learning journal application is considered practical in writing the learning process. Learners can now carry mobile devices anywhere, anytime to support their learning and personal activities. From our experiences, computing students are willing to learn through the support of mobile devices (Oyelere, Suhonen, Wajjiga, & Sutinen, 2018). Where difficulties in writing the learning process can be overcome. The activity of writing the learning process is an important activity, because by writing the learning process, it can find useful learning data in the future. If the habit of writing this learning journal is continuously carried out, it will increase the metacognitive awareness of students and students will more easily understand the lessons (Yulianingtyas, Budiasih, & Marfuah, 2017).

As a supporting tool Learning journals are useful for observing how learning styles are used so that they find appropriate learning styles. Learning styles are one of the biological characteristics and development of a person, one learning style may not be as effective as another (Akyürek et al., 2018). So that after finding the appropriate learning style can optimize learning outcomes. The use of learning journal applications must be carried out continuously to get maximum results by observing our previous style. Through the use of learning journals used to help students achieve learning objectives optimally (Andriyani, 2017) this is a long-term form of the use of learning journal applications.

IV. CONCLUSION

From the data above, it can be concluded that the Universitas Negeri Padang (UNP) students need a mobile application-based learning journal because their use is considered practical in learning. Students can easily record the learning process including learning styles. Not only used to record but students can observe their own learning styles by evaluating the learning styles they use. So that the long-term use of this application can optimize student learning at Universitas Negeri Padang (UNP).

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