Food Processing Practice Management Model Based on Mobile Learning (Elena) For Pkk Ft Unnes Students

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Abstract

The aim of this research is to analyze the management of food processing practice courses for PKK FT UNNES students. Develop a design model for mobile learning-based food processing practice management (ELENA) for PKK FT Unnes students. PKK FT Unnes. This research using descriptive quantitative. The research method used was the data analysis used by using a percentage descriptive statistical approach. This approach is used to describe the extent to which the ELENA guidebook can be understood and followed by the working steps procedures in practical food processing courses for students of the PKK FT Unnes Department. This research will produce a management model for ELENA-based food processing practice courses in the form of manuals and teaching materials for practical food processing lectures for students majoring in PKK FT Unnes.

Introduction

Increasing knowledge and skills of students is mostly done by the government and universities through various practical lectures. Along with the pandemic conditions, student learning is carried out online, but for practical learning and food processing exercises which are usually carried out in campus labs, now students have to study independently at home, so the results are not optimal, even many practical training results can be judged to fail in improving student learning outcomes at home. House. Management is a process or framework that involves guiding or directing a group of people towards organizational goals or real purposes. Practical lectures are learning techniques that involve individual observations on work and determining feedback to improve performance or correct errors (Pratolo, Sofyani, & Anwar, 2020). It was further explained that practical lectures were intended to improve and develop the personal, professional, and social abilities of practical lecture participants (Liebler & McConnell, 2020).

Methods and strategies that can be used to develop human resources for students and education staff through formal education, practical education and lectures, supervisor guidance, peer guidance, workshops, workshops, seminars and program socialization, internships, exchange of personnel in the form of collaboration, comparative studies , outbound, and recreation. In a learning exercise processing practice requires a good management so that the learning objectives can be achieved. Based on the results of the preliminary study, students in carrying out practical food processing exercises experienced several problems when carrying out independent exercises at home. They must follow other self-development but collide with infrastructure, knowledge and skills, so that students do not get assistance in the learning process, they are only told to do assignments so that the results of food processing practices are not in accordance with the expected quality standards, both in terms of shape, color, texture and aroma. So that they are only impressed that the important thing is that they have done the task and collected the task in the form of photos and videos

Analysis of needs that are less than optimal, sometimes only refers to the curriculum, has not touched the side of student abilities that are more specific. The important thing is for students to follow the class schedule and finish and get good grades. The limitations of infrastructure, materials and tools at home due to the pandemic conditions have caused PKK students not to receive practical lecture directions, maximum practical assistance in an equitable manner, not to carry out a post-practice evaluation process, in which students must disseminate the results of practical lectures to students. others so that they can increase the knowledge of other students. Thus the management of food processing practice courses is a necessary tool in an effort to achieve the objectives of practical courses effectively. Through good management, a practical lecture program is expected to be able to improve skills and develop students' personal, professional, and social abilities as a means of promotion for individuals in an organization. This problem confirms that the PKK Department requires a special strategy so that the skills and abilities of food processing students during the pandemic period remain good and correct.

Based on the general conditions regarding the learning and processing practice exercises that were carried out at home above, a preliminary study in the form of field observations, documentation studies and interviews with PKK students was carried out. The initial study was intended to obtain an overview of the teaching and learning process of food processing, particularly the practical skills of food product processing for PKK students.

The development in the world of technology is very rapid so that various innovations appear one after another. A technology may directly replace a previously emerging technology, or replace a technology that has long existed in society.

Mobile learning (ELENA) has become a popular research topic in investigating how to use mobile devices in teaching and learning (Sewang & Halik, 2020). M-learning is a learning method using a smartphone, phablet, tablet, netbook or notebook as a learning device and is part of electronic learning (e-learning). However, M-learning is more flexible than e-learning because students can study anywhere, anytime (Malik, Mathew, Al-Nuaimi, Al-Sideiri et al., 2019). In addition, M-learning is a new and important learning strategy because mobile devices are now a necessary tool in students' daily lives. M-learning is more interactive, involves more contact, communication, and collaboration with others.

M-learning is a student-oriented approach that makes learning informal, independent and

collaborative (Sibirskaya, Popkova, Oveshnikova, & Tarasova, 2019). University students in Guangzhou prefer to use mobile devices to study outside rather than in the classroom. In addition, the assessment method is an important factor for using mobile devices for learning. Finally, reading and searching are the most used of M-learning activities. These findings can help students to design M-learning activities either for class or outside the classroom and motivate students' attitudes and learning practices (Jaradat, 2014). Learning uses ELENA to make participants more independent.

Independent learning is a process in which students are involved in identifying what needs to be learned and being in control of finding and organizing answers. This is different from self-study, where students are still allowed to provide and organize educational materials, but students study alone or in groups without the presence of students (Kirkman, Coughlin, & Kromrey, 2007). Aspects measured in independent learning include self-management, desire to learn, and self-control. Independent learning will also enable students to regulate the learning process in the form of self-initiative, independent, self-regulating, self-exploration. Independent learning will give freedom to students in learning activities to develop independent learning and achieve optimal science learning achievement (Song & Hill, 2007).

Kenney and Newcombe (2011) conducted a comparison to establish effectiveness in the classroom view and found that blended learning had higher average scores than non-blended learning environments. Garrison and Kanuka (2004) examined the transformative potential of blended learning and reported increased course completion rates, increased retention and increased student satisfaction. Comparisons between blended learning environments have been carried out to see differences between academic achievement, class dispersion and differences in gender performance and whether or not significant differences were found (Kazu & Demirkol, 2014).

Swan, Richardson, and Hutton (2003) found that not only do students feel the benefits of learning when they themselves are recognized as "Real" or "Authentic," but also that students feel the benefits of learning from being in the presence of others. Research gaps: Other gaps in the literature, however, have the potential to hinder the integration of mobile learning in the classroom, perhaps more so than others. The student-student gap is a major barrier to incorporating mobile devices in the classroom. While student fears of harassment and cheating may apply to some degree, research is needed to understand how to properly teach "mobile etiquette." Since mobile devices can be used for social and educational purposes, students should be taught how to use and navigate mobile phones appropriately in an educational context.

It is necessary to develop practical lecture programs that can improve the quality of practical lectures so that practical lectures run effectively in achieving goals. The practical lecture program developed must be able to meet the needs of participants who have diverse competency characteristics. Seeing the problems above, it is necessary to develop an ELENA-based food processing practice model for PKK FT Unnes students.

Research Methods

This research using descriptive quantitative. Analysis of the data used is by using a descriptive statistical approach to percentages. This approach is used to describe the extent to which the ELENA guidebook can be understood and followed by the working steps procedures in practical food processing courses for students of the PKK FT Unnes Department. This research will produce a management model for ELENA-based food processing practice courses in the form of manuals and teaching materials for practical food processing lectures for students majoring in PKK FT Unnes.

PEM e-learning which is intended in this study is to apply the Elena program which is already available on the ELENA learning facilities and infrastructure on the Semarang State University campus.

Furthermore, in this study, a guide book (e-book) will be prepared which contains instructions and steps for the learning process of food processing practices for students of the PKK FT Unnes Department. In addition to using e-book media, demonstration media on how to process food are also prepared, starting from the preparation of materials, tools, processing processes to the presentation and packaging of food products.

Results and Discussion

Research Results

This research focuses on the study of the usefulness of Elena and the ease of use of Elena on the behavioral intention to use Elena to evaluate the effectiveness of Elena-based food processing training for students of Family Welfare Education, Faculty of Engineering, State University of Semarang. This study aims to determine how much the usefulness of Elena and Elena's ease of use on behavioral intention to use Elena to evaluate learning in food processing training.

a. Usefulness of Elena to support learning effectiveness

Based on data obtained from 82 respondents from Family Welfare Education students, data on the effectiveness of using Elena showed good criteria with a percentage gain of 74.86%. The use of Elena will increase effectiveness in learning because Elena is supported by useful features in lectures. One of the features contained in Elena is a feature for uploading lecture materials. With this feature students can download lecture materials wherever they are. Students can download materials at home, in cafes or at the mall without having to go to campus. The only devices needed are a personal computer and an internet network (wifi).

Another feature is being able to carry out exams using Elena. Elena is a learning media that can cut time, distance and cost and supports the conservation program upheld by the State University of Semarang. However, there are features that cannot be used, namely the use guide feature for lecturers and students as well as an explanation feature about Elena. The feature cannot be accessed because the link has been removed. The activeness of lecturers in using Elena will encourage students to use it more often. The results showed that most of the students planned to use Elena every day at least once to increase their learning effectiveness. That's all because Elena has a positive impact on making it easier for students to learn. Students will get many things including easy completion of lecture assignments, downloading lecture materials and being able to take online exams.

Overall, Elena is very useful for students because it has an important role to support the online learning process, especially in learning and training in food processing. In accordance with Barki, Titah, and Boffo (2007) that perceived usefulness is defined as the extent to which a person believes that using a technology will improve his job performance. Thus, if someone believes that the information system is useful, then he will use it. Conversely, if someone believes that the information system is less useful then he will not use it.

Ease of use Elena to support learning effectiveness

According to the data that has been obtained regarding the ease of use of the features available on Elena based on the assessment responses from PKK FT Unnes students, an average percentage score of 63.99% is obtained with the criteria being quite easy in terms of its use. Students can easily use Elena because the features in Elena are easy to understand and use. Supported by Elena's good design, Elena is very interesting to use. Students only need to read the user manual once to be proficient in using it. Due to its ease of use, students will use Elena at least once a day.
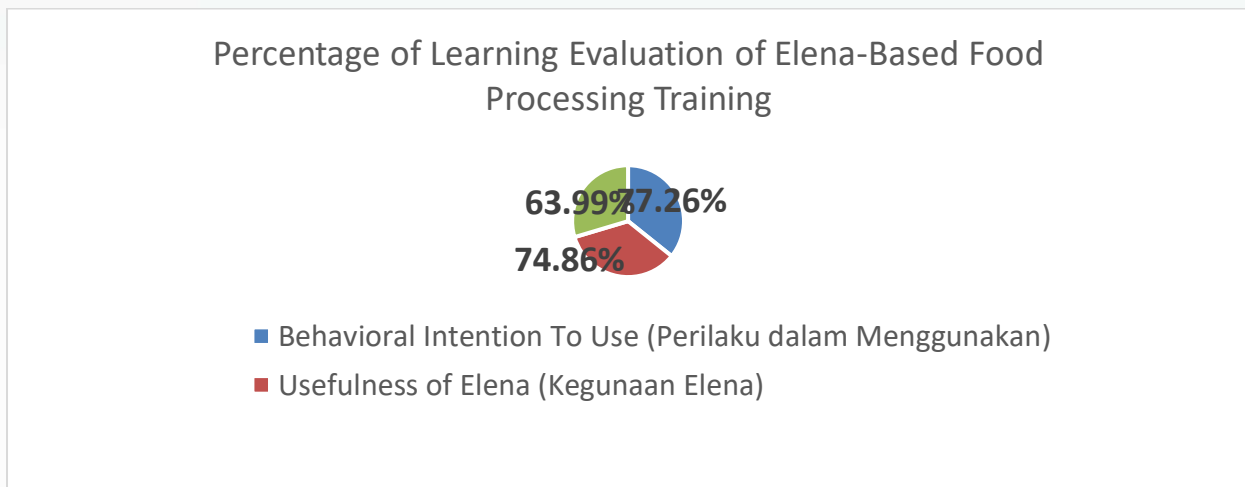
The lack of service features provided by Elena causes lecturers and students to be less interested in using Elena. Elena only contains features regarding course links, user guides, explanations about Elena and is integrated with student information systems and academic information systems. The need for additional innovation of service features in Elena to increase students in using Elena. The more services in Elena, the lecturers and students will often use Elena.

The ease of using Elena is also still not completely smooth. Every now and then students will find it difficult if Elena's users exceed capacity. Often students find it difficult to log in to use Elena. This obstacle is often experienced by students when they are doing exams together. The addition of capacity usage is absolutely necessary because the users of Elena are all students of the State University of Semarang.

Overall, Elena's ease of use affects the results of the assessment by students in supporting the learning process. In accordance with Barki et al. (2007) that perceived ease of use is a belief about the decision-making process. If someone believes that the information system is easy to use then he will use it. On the other hand, if a person believes that an information system is not easy to use, he will not use it.

Usefulness of Elena and ease of use Elena on behavioral intention to use Elena to support the effectiveness of learning simultaneously

The results of data analysis in this study indicate that simultaneously the usefulness of Elena and Elena's ease of use have a positive effect on behavioral intention to use Elena to support effectiveness in student learning, as evidenced by the percentage value obtained by 77.26%. The more often students use Elena (at least once a day), the learning effectiveness will increase. The usefulness of Elena can be explained that using Elena can complete many tasks, can save time and make it easier for students to learn. The ease of using Elena can be explained that the features in Elena are easy to use, clear and not confusing for users. This is in accordance with the research of Szajna (1994) who found that the constructs of perceived usefulness and the constructs of perceived ease of use were used to explain attitudes toward system use, behavioral intention, reported system usage and system usage. predictable.

The following describes the data on the results of student evaluations in using Elena to support the learning process of food processing training in the form of diagrams:

Percentage of Learning Evaluation of Elena-Based Food Processing Training

63.99% 77.26%
74.86%

■ Behavioral Intention To Use (Perilaku dalam Menggunakan)
■ Usefulness of Elena (Kegunaan Elena)

Discussion

Elena is an online learning application owned by Semarang State University. Elena was developed from Moodle. Moodle is an application for developing online learning. The cause of the ineffectiveness of online learning with elena, the author takes a case resolution by making improvements in the material section, where this material is considered important for the author to be completed immediately because the learning content in online learning needs to be improved, so that students can apply guided independent learning.

Elena is an online learning platform or online learning that is used in Semarang State universities. Online learning is learning that is structured with the aim of using an electronic or computer system so that it can support and improve the learning process (Vovides, Sanchez-Alonso, Mitropoulou, & Nickmans, 2007). The characteristics of online learning according to Marco, Penichet, and Gallud (2013) are learning that is or is carried out in a network, which is able to quickly store and retrieve, distribute and share learning. In its implementation, online learning uses self-learning materials, which are then stored on certain pages so that they can be accessed by lecturers and students wherever and whenever.

Online learning has a fairly comprehensive principle of benefit as a support for the learning process at the higher education level. The benefits of online learning according to Veletsianos, Kimmons, Larsen, and Rogers (2021) include: flexibility, where online learning provides flexibility in choosing the time and place to access the material. Online learning provides an opportunity for learners to independently take control of learning success. Online learning provides efficient provision of physical facilities and facilities for learning and cost efficiency for students is the cost of transportation and accommodation. Improve the ability to display information with information technology devices. There are many advantages of e-learning itself, namely flexibility, interactivity, speed, visualization through the various advantages of each media (Kalyuga, 2007).

The use of online learning technology in the learning process has become a demand for developments in line with the Industrial Revolution 4.0. As a university that has a vision of an international reputation, State University of Semarang has developed the "ELENA" application as an online learning-based learning platform that can be accessed by lecturers and students anywhere and anytime. Elena (Electronic Learning Aid) is an e-learning site developed by the State University of Semarang (Unnes) based on MOODLE version 2.0 to support academic activities. MOODLE is an acronym for Modular Object Oriented Dynamic Learning Environment is an open source software package under the GNU/GPL (Public License) which is useful for creating and providing internet-based courses, training and education developed by Martin Dougiamas since the 90s. At the beginning of its emergence in 2009, this e-learning site was named ILMO which later changed its name to Elena. Elena's e-learning site can be accessed through the address http://elena.unnes.ac.id. Online learning transforms the learning experience in the classroom, providing additional learning assistance for students and enabling the formation of a stable and integrated learning community (Ayu, 2020). Online learning helps students to develop some generic skills in finding and evaluating information for their learning. In addition, through online learning, students can familiarize themselves with a number of technology tools including discussion boards, screencasts, and podcasts, all through a learning management system (Johnston, 2010).

Conclusion

Based on the results of the study, it can be concluded as follows:

1. Based on data obtained through 82 respondents from Family Welfare Education students, data on the effectiveness of using Elena showed good criteria with a percentage gain of 74.86%.
2. According to the data that has been obtained regarding the ease of use of the features available on Elena based on the assessment responses from PKK FT Unnes students, an average percentage score of 63.99% is obtained with the criteria being quite easy in terms of its use.
3. The results of data analysis in this study indicate that simultaneously the usefulness of Elena and the ease of use of Elena have a positive effect on behavioral intention to use Elena to support effectiveness in student learning, as evidenced by the percentage value obtained by

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