P-ISSN: 2776-7329, E-ISSN: 2776-7310
Proceedings
5th Vocational Education International Conference
Semarang, 13 July 2023

The Use of Digital Literacy through E-Learning and Project Assignments in the Food and Beverage Service Course

Yeni Yulianti*, Guspri Devi Artanti, Annis Kandriasari

State University of Jakarta, Jakarta, Indonesia
**Corresponding author. E-mail: yeni.yulianti@unj.ac.id*

ABSTRACT
This research aims to improve the quality of learning and student competence through the use of e-learning and project assignments in the Food and Beverage Service. E-learning used is website-based, while the assignment of this subject matter project is in the form of videos, books and organizing table manners. The research method used is quasi experiments in implementing e- learning and project assignment in the digital era to support the project based learning in Culinary Art Education students. The data collection method used in this study was test and observation, while the research instruments used were tests and observation guidelines. Testing the hypothesis using the Wilcoxon test while the activeness towards learning using the descriptive test and gain-score. The Wilcoxon test at a significance of 0.000 <0.05 if converted to Zcount is -4.247 > -1.96 meaning that Ho is rejected and Ha is accepted. So that it can also be concluded there is an influence of the use of e-learning in the F&B Service course on knowledge in Culinary Art Education students. The value of student learning activeness in the high category, the gain value of 0.72 is in the range G> 0.7, meaning that the increase in learning outcomes for F&B Service before and after using e-learning is in the high category. Implementation of innovative and interactive learning and students can improve F&B Service skills through initial understanding before implementing the material with the availability of digital literacy and ease of learning.

Keywords: *Digital Literacy, E-Learning, Project Assignments in the F&B Service.*

1. INTRODUCTION

Advances in technology and information in the 21st century continue to grow rapidly so as to change the pattern of human life. This has an impact on the world of education. Vocational education requires the use of technology in the learning process so that the use of technology can improve the quality of vocational education. Learning that utilizes information and communication technology (ICT) is in line with the demands of 21st century TVET learning skills. In line with this, vocational education also requires online-based learning [1].

Currently, technological developments have grown very rapidly, which can be seen from the abundance of innovations resulting from advances in science and technology. Of course, this has a positive impact on the country and especially on the world of education. Hoyles & Lagrange (2010) and Putrawangsa (2018) emphasize that digital technology is one of the things that has a major impact on the education system in the world today [2] [3]. It is explained that one of the problems faced in the world of education in Indonesia, especially in universities that produce innovative and productive generations in the industrial era 4.0 is the lack of breakthroughs in research and development that support the industrial revolution 4.0 and the research and development ecosystem [4]. It is reported that developing countries have failed, completely or in part, to implement e-learning systems effectively [5]. It was stated in [6] that the success factor for distance learning lies in 3 main factors, namely teachers, learners and technology. One of the external factors that influence the learning outcomes, including the learning media used for delivering the material [7]. By using learning media during the learning process in the classroom, it is hoped that the thoughts, feelings, concerns and interests of students can be stimulated and students can receive and understand the subject matter from the educator well [8]. includes the learning media used for delivering the material [7]. By

using learning media during the learning process in the classroom, it is hoped that the thoughts, feelings, concerns and interests of students can be stimulated and students can receive and understand the subject matter from the educator well [8]. includes the learning media used for delivering the material [7]. By using learning media during the learning process in the classroom, it is hoped that the thoughts, feelings, concerns and interests of students can be stimulated and students can receive and understand the subject matter from the educator well [8].

During the Education 4.0 era, this is a pretty tough challenge for educators, in facing this, education must also change, such as re-development of learning media that are currently used to support learning. Reorient curriculum development that refers to ICT-based learning, the internet of things, big data and computerization to produce graduates who are able to compete in the global era. Schools and educators in deciding how education and learning are organized, teachers must have strong soft skills and create student-centered learning, collaborative learning, meaningful learning, and learning that is integrated with values sublime in everyday life [9].

One of the basic skills courses in the Culinary Vocational Education study program is Food and Beverage Service. This course discusses the concept of food and beverage service; development and history of table setting, types of table setting (formal and informal banquets), principles of step by step table setting, mise-en-place restaurant; types of table set-ups; restaurant service stages (sequences of service); table manners, serving alcoholic & non-alcoholic drinks, as well as restaurant operational practices from preparation to closing the restaurant.

Implementation of lectures by applying the Student Center Learning (SCL) approach with various strategies used in learning such as presentations, tutorials, and project-based learning that promotes student independence to seek and find both knowledge and skills and build the expected competencies. Learning is carried out in Blended Learning, namely online (in the network) and offline (face to face) to produce service tools in restaurants, namely practicum planning, menu cards, napkin folding clippings, video practicum dishes service, and book collection of drinks [11].

The implementation of learning for the F&B Service course so far still uses a textbook source, so that students have difficulty understanding the material because not all of the objects in the material are understood clearly. Students still refer to the lecturer's PPT file which should only be used as an explanation when teaching in class. As a result, students find it more difficult to understand practical material that should be presented audio-visually. Besides that, the availability of gadgets and laptops is not used by lecturers to become student tools in learning to access material independently and can be done at any time, and with an attractive appearance.

To answer the challenges of vocational education and the demands of information age learning skills, a learning model is needed that supports student skills and flexible learning. Digital literacy and learning models are needed in the era of the industrial revolution 4.0 which are relevant to universities and the industrial world, in accordance with the use of technology, the learning models developed are based on the philosophical framework of vocational education, skills, technology, the relevance of the vocational field to industry through projects.

Project-based learning is one of the efforts to change learning that has been centered on educators into student-centered learning. Project-Based Learning is a comprehensive approach to teaching and learning that is designed so that students do learning as a stimulus and focus on student activities [12].

Thus this learning uses activities/projects as media. This method requires students to be able to gain new experiences and work on new things (exploration and elaboration). To advance students, Vocational education institutions seek innovative and collaborative project-based teaching materials to form students more creative, cooperative, competitive, resilient, and ready to face the current era of digital communication so that students will acquire hard skills and soft skills [13].

The Online-based Project Based Learning model is a learning model that combines face-to-face and online learning that places more emphasis on online-based projects. In addition, this model has elements for interconnection that are multi-directional. Then, there are extensive digital learning resources, such as jobsheets, YouTube, PPT, the F&B Service website which can be accessed flexibly without time and place limits, and also includes elements of collaborating through online discussions and creating creative and innovative group projects that industry relevant.

Evaluation is carried out to see the extent to which student learning outcomes are achieved through the use of digital literacy in participating in the learning process and working on project assignments given, as motivation for students, rewards are given.

2. METHOD

The research method used in this study is a qualitative method. Qualitative research is a study that is used to describe and analyze phenomena, activities, attitudes,

perceptions of people's thinking individually or in groups. Several descriptions are used to determine principles and explanations that lead to conclusions [14]. The author uses a qualitative research method with a descriptive-interpretive approach, because in this study the authors present the results of student achievement in the Food and Beverages Service using the Project Base Learning model to assess the work created according to selected theme.

Research Subject: The courses that are the subject of research are Food and Beverages Service course, which are taken by Batch 2021 students in the Culinary Education study program, Faculty of Engineering, Jakarta State University. Data analysis techniques use various techniques (combine) several existing data collection techniques and data sources (triangulation). Data obtained from the results of the observation sheet. Document data in the form of photos of work, as well as assessment data and portfolios in the form of narrative descriptions of themes and job sheets. The next step is to present the data in a descriptive-interpretative manner and draw conclusions that can describe the increased learning outcomes of Culinary Education students using the Project Base Learning model.

3. RESULT AND DISCUSSION

The use of digital media in learning the vocational field of Catering – FT – UNJ in the web-based Food and Beverages Service course really helps both students and lecturers in the learning process. This allows students to interact directly with the media and allows students to study independently. In addition, the use of web-based media can be a reference for effective media choices for lecturers to help convey material to students. Therefore, it is necessary to develop web-based digital learning media by taking into account the rules or systematics of developing media while still paying attention to the quality of the media.

This learning media contains the components Home, About, Competence, Lesson Plans, Material for Basic Course Procedures, Practice steps, Forums, and Evaluation. This web-based learning media has advantages compared to learning media in the form of books, which are easy to understand, easy to access anytime and anywhere, as well as easy access to supporting media such as video tutorials which cannot be accessed in printed modules.

Development of digital media Food and Beverages Service based on mobile learning web is a WIX website that has been uploaded online. The following is the opening display on the course web page in the figure 1.

Figure 1. Learning Website for Food and Beverages Service

The following is a barcode that students can use to access the Food and Beverages Service on figure 2.

Links:https://bit.ly/mobiletatahidangbogaUNJ

Figure 2. *Barcodes Mobile Learning* Food and Beverages Service

In addition, the spread of mobile learning is also used in the UNJ Learning Management System like in the figure 3.

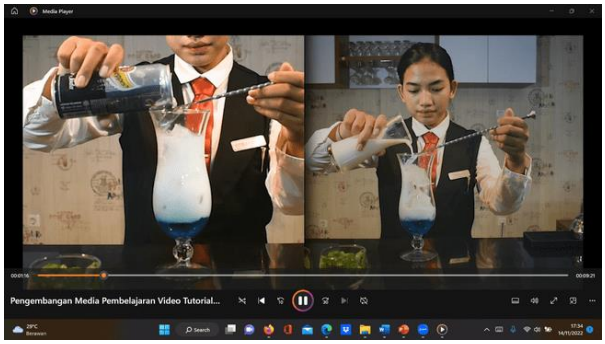
Figure 3. UNJ Learning Management System for Food and Beverages Service Course

Digital literacy is used in the form of a digital module which is shown in the image of the Restaurant Mise End Place Module at figure 4.

https://bit.ly/modulRMEP
https://bit.ly/PanduanpracticumflipSOS

Figure 4. Digital Module

Digital literacy in practicum activities, especially tutorials, is carried out through learning videos shown in the following images and links on figure 5.



https://www.youtube.com/watch?v=yujW4lM-GhA

Figure 5. Video of Serving and Making Mocktail Drinks

Besides that, digital literacy is presented on napkin folding material in the form of video tutorials as shown in the figure 6.

https://drive.google.com/file/d/1zWIA9iMMRFgOuzEK7kt6BsZh5PbPVUAw/view?usp=sharing

Figure 6. Video of Making Folding Napkins

Digital literacy display of restaurant mise en place material in the figure 7.

https://drive.google.com/file/d/1JWLYVTouM2sDkwH-MQlsxoWp3AMYC_PR/view?usp=sharing

Figure 7. Video Restaurant Mise En Place

Digital literacy display of table set up material in the figure 8.

https://www.youtube.com/watch?v=ALYeo1CHqIo
https://www.youtube.com/watch?v=IHQeLRV-ysA
https://www.youtube.com/watch?v=sPwKqgf4CGU

Figure 8. Table Setting Up Videos

The advantage of using social media as a learning medium lies in the broader aspects of interaction and sharing of information [15]. Examples of the use of Facebook and You Tube for higher education are suggested by the results. Social media users provide significant results for student learning on campus Mohamed & Guandasami (2014) and Abdelazis (2015). This shows that social media is an alternative as a means of teaching and learning in the era of modern technology [16] [17]. The use of social media as a learning medium increases student enthusiasm for learning and doing Indonesian assignments. The social media used in this research is YouTube [18].

Implementation of learning evaluations such as quizzes, exams, surveys, etc. using digital literacy such as Google forms, wordwalls, and quizzis like in figure 9.

https://wordwall.net/resource/32657298

Figure 9. Example of a test/non-test form

The digital age is characterized by information sharing along with a sense of competition about whose information is more accurate and more important. This culture embedded in a sense of speed has in turn been changing the classroom-dynamic in terms of utilizing the new literacy of the digital age. A well-balanced integration of social media can be viewed as an effective strategy in teaching-learning processes by exploring the possibilities and converting students' interests into something more worthwhile [19].

3.1. Gain Value Test Results

The gain test is intended to determine the results of pre-test and post-test student data calculations using digital literacy in the F&B Service and project assignments. The average value before being given digital literacy and project assignment was 58.74 in the less category.The average value after being given digital media was 88.34 which was in the good category. The results of the gain score on the F&B service knowledge before and after applying digital literacy show a gain value of 0.72 in the range G > 0.7, meaning that the increase in F&B Service knowledge before and after is in the high category. This is reinforced by the results of research showing that Android-based nutritional education media and websites with the theme of balanced nutrition have been successfully developed by demonstrating a good level of acceptance and liking. Android-based nutritional education media shows better results when compared to websites and other media. There are positive changes in the knowledge, attitudes, and practices of elementary school children after nutrition education [20].

3.2. Results of Hypothesis Testing Analysis

3.2.1. Normality Test Results

The normality test was carried out with the help of the SPSS (Statistical Package for Social Science) version 16. The results of the Shapiro-Wilk normality test can be seen, that the value of sig. Pre-test 0.902 and sig. Post-test 0.00. This shows, the value of sig. Pre-test > 0.05 or 0.902 > 0.05 and sig. Post-test < 0.05 or 0.000 < 0.05 so that it can be concluded that the results of the normality test from the pre-test and post-test of the study sample are not normally distributed.

3.2.2. Homogeneity Test Results

Homogeneity is used to determine whether several variants in the population are the same or not. As a test criterion, if the sig. > 0.05, it can be concluded that the variances of two or more groups are the same. The output results of the one way ANOVA homogeneity test can be seen with the sig value. The score of learning outcomes is 0.407. The results of this calculation show the sig. The score of the learning outcomes of the F&B service is > 0.05 or 0.407 > 0.05 so it can be concluded that the scores of the results of learning the F&B service are obtained from the results of filling out the questionnaire on the results of learning the F&B service on the pre-test and post-test have the same variance.

3.2.3. Media Use Effect Test Results

The Wilcoxon test was conducted to determine the effect of the use of digital literacy in hiding systems and project assignments on Culinary Education Art students. Based on the results of the SPSS 16 test, Sig. (2-tailed): Probability value/p value Wilcoxon test: Result = 0.000. This means: there are differences in learning outcomes between before and after the digital literacy treatment of the dish service. Reason: The p value < 0.05 (95% confidence). If seen from the Zcount value, it is -4.247 and the Ztable value is converted to -1.96, a significance direction of 0.05 so that -4.247 > -1.96 means that Ho is rejected and Ha is accepted. So that it can also be concluded "There is an influence of the use of digital literacy in food processing and project assignments on learning outcomes in Culinary Education Art students".

This research produces an application that contains digital material, to make it easier for students to obtain material and study material anywhere, which can be accessed online via a smartphone. The result of digital material application training is that students can easily use the application because it can be accessed via a smartphone, material can be opened via a smartphone, material can be studied via a smartphone, so it can be accessed anywhere [21].

Based learning Digital literacy apart from implementing technology in the learning process, is also effective in improving student learning outcomes [22]. The results are supported by Nugraha, et al's research in 2020 showing that the e-learning learning model is the most widely used learning in vocational education. E-learning developed for vocational education must be able to measure competency results through e-portfolios, virtual-based and easy to use. (4) Obstacles that can be identified are: (a) difficulties in adapting teachers and students in changing vocational learning during the

Covid-19 transition from conventional to online, (b) lack of work skills for vocational education students that are not obtained during online learning,

Things that need to be prepared by trainers with the Project Based Learning method include: determining learning material by selecting real problems, compiling a list of students' wishes so that the learning process is fun, designing problem presentations to be able to guide students, designing problem presentations to be able to guide students, determine the time allocation and learning schedule, organize study groups, design learning resources, design learning environments, and design process assessment formats and learning outcomes [24].

The Project Based Learning method is used to involve students in real objects optimally in the learning process. The physical, mental and mental involvement of these participants will be able to encourage learning motivation, decision-making skills, and train critical thinking and innovative work in solving various problems encountered [25].

Project Based Learning is a learning method that can be applied at all levels of education. In this learning method the educator acts as a facilitator. Project Based Learning aims to find solutions to problems, besides that students also learn the concept of how to solve problems and develop critical thinking skills. In studying the concepts and critical thinking skills, students work together in their groups to study real problems. In this group mechanism there will be a dialogue of giving and receiving between the members of the group so that a deep and mature understanding is obtained. This Project Based Learning focuses on: solving real problems, group work, feedback, discussions and final reports.

It can be concluded that the digital literacy implementation model in pesantren universities, in this case the University of Darussalam Gontor, is being conducted through the utilization of e-learning in the process of basic learning courses. The digital literacy component consists of three things: access, using skills, and communicative abilities [26]. The results of the study show that there is a percentage of success for students of the Cosmetology study program in the Fantasy Makeup course with the Application of the Project Base Learning Learning model [27]

4. CONCLUSION

There is an influence of the use of digital literacy in F&B Service and project assignments on knowledge in Culinary Education students. Learning to use digital literacy and project assignments in F&B Service media lectures can help students to shape the character of students who are independent, innovative and collaborative, and improve analytical skills and productivity, so that students are motivated and enthusiastic about using digital literacy and project assignments to reduce feelings of bored in the teaching-learning process in class. Updating learning literacy and methods is very important for lecturers to familiarize students with the challenges of technology and information users accessing information. This digital era marks that now society has become a modern society.

REFERENCES

[1] Ketut Nurhayanti, IGA Astri Pramitari, I Made Budiada, The Effectiveness of Online Learning in Vocational Education, Journal of Quality Assurance Volume 7 Number 2 2021, p 216-221,http://ejournal.ihdn.ac.id/index.php/JPM

[2] Hoyles, C., & Lagrange, J.-B., Mathematics education and technology: Rethinking the terrain. Springers, 2010.

[3] Putrawangsa, S., & Hasanah, U. (2018). Integration of Digital Technology in Learning in the Industrial Age 4.0. Journal of Tatsqif, 16(1), 2018, p 42–54, DOI:https://doi.org/10.20414/jtq.v16i1.203

[4] Reflianto and Syamsuar, Information technology-based education and learning challenges in the era of the industrial revolution 4.0, Scientific Journal of Educational Technology, 2018, DOI:https://doi.org/10.24036/et.v2i2.101343

[5] S. Shalloum, and K. Shaalan, Factors affecting students' acceptance of e-learning system in higher education using UTAUT and structural equation modeling approaches, Advances in Intelligent Systems and Computing, vol. 845, 2018, p 469–480 DOI :https://doi.org/10.24036/et.v2i2.101343

[6] A. Latip, The role of information and communication technology literacy in distance learning during the Covid-19 pandemic, EduTeach: Journal of Education and Learning Technology. Vol 1 No 2 (2020):June 2020 issue, p 107-115, DOI:https://doi.org/10.37859/eduteach.v1i2.1956

[7] Rusman, Computer-Based Learning and Learning Develops Teacher Professionalism, Bandung: Alfabeta, 2013.

[8] Akrim, Media learning in the digital era, Proceedings of the 5th International Conference on Community Development (AMCA 2018), Advances in Social Science, Education and Humanities Research, volume 231, 2018, p 458-460, DOI: 10.2991/amca - 18.2018.127

[9] Sabaruddin, Indonesian Education in the face of the 4.0 era, Journal of Educational Development: Foundations and Applications, 10(1), 43-49 .https://doi.org/10.21831/jppfa.v10i1.2934

[10] Khairani, NA, Rajagukguk, J., & Derlina, Development of Moodle E-Learning Media in Industrial Revolution 4.0 Era, 384 (Aisteel), 2020, p 752–758, DOI:https://doi.org/10.2991/aisteel-19.2019.172

[11] Yulianti Yeni, Semester 117 Learning Plan for Dasar Tata Hidang, UNJ, 2022.

[12] Donni Juni Priansa, Strategy Development & Learning Model, Bandung: CV Pustaka Setia, 2019

[13] Harwiyati, E., & Rohmawati, H, Application of the Project Base Learning Learning Model to Improve Learning Achievement in Fantasy Makeup Courses at Aks-Akk Yogyakarta, Socia Akademika Journal, 8(1), 2022, p 26 - 32. Retrieved fromhttps://aks-akk.e-journal.id/jsa/article/view/178

[14] Sugiyono, Quantitative, Qualitative, and R&D Educational Research Methods, Bandung,: Alfabeta, 2010.

[15] Selwyn, Neil. Faceworking: Exploring Students' Education-Related Use of Facebook. Media and Technology, June 2009 p. 157 – 174 DOI:10.1080/17439880902923622

[16] Mohamed, M. & Guandasami, W, The Influence of Peer-to-Peer Social Networks and Computer Supported Collaborative Learning (CSCL) in Mathematics, International Journal of Mathematics and Computer Applications Research (IJMCAR) ISSN(P): 2249 -6955; ISSN(E): 2249-8060 Vol. 4, Issue 5, Oct 2014, 53-62 2014.

[17] Abdelaziz, Mohammed. Determinants of Electronic Word of Mouth influence on Hotel Customers Purchasing Decision, Journal of Faculty of Tourism and Hotels, Fayoum University, Vol. (9), No. (2/2), Sept. 2015

[18] Muhammad, Yusi Kamhar Guandasarni, Erma Lestari, Utilities of Youtube Social Media as Indonesian Language Learning Media in Higher Education. INTELLIGENCE: Journal of Education p-ISSN: 2656-8675 e-ISSN: 2656-601X, UNITRI PRESS Tribhuwana Tunggadewi University Volume 1 Number 2 in June 2019.

[19] Madhavi Godavarthy, Digital Literacies And The English Classroom, International Journal of English and Literature (IJEL) ISSN(F): 2249-6912; ISSN(E): 2249-8028 Vol. 5, Issue 1, Feb 2015, 65-70,https://www.academia.edu/11767531/DIGITAL_LITERACIES_AND_THE_ENGLISH_CLASSROOM

[20] Perdana Fachruddin, Madanijah Siti , Ekayanti Ikeu, The development of nutrition education media based on android and website and the effects on behavior about balanced nutrition in primary school students, J. Food Nutrition, November 2017, 12(3):169 -178 ISSN 1978-1059 EISSN 2407-0920 DOI: 10.25182/jgp.2017.12.3.169-178

[21] Solikin, Imam & Amalia, Rahayu. (2019). Mobile Web-Based Digital Materials Using 4D Models. SYSTEMATION : Journal of Information Systems, Volume 8, Number 3, September 2019 : 321 –328 ISSN:2302-8149. E-ISSN:2540-9719

[22] Mumpuni, Atikah and Nurpratiwiningsih, Laelia. (2018). Development of Web-Based Learning to Improve Creative Writing Ability of PGSD Students. Education Horizon, June 2018, Th. XXXVII, No. 2

[23] Nugraha, S., Sudiatmi, T., & Suswandari, M. (2020). STUDY OF THE INFLUENCE OF ONLINE LEARNING ON CLASS IV MATHEMATICS LEARNING OUTCOMES. Journal of Research Innovation, 1(3), 265-276.https://doi.org/10.47492/jip.v1i3.74

[24] Yanti Rosinda Tineuti, Project-Based Learning Module, Yogyakarta: CV Budi Utama, 2018.

[25] Ruski & Sholeh, Yusrianto. Learning Project Based Learning Using Social Media You Tube in Learning Media Courses, JPEK (Journal of Economic Education and Entrepreneurship) Vol. 3, No. 2, December 2019, Pg. 151-158 E-ISSN: 2549-0893 DOI:http://dx.doi.org/10.29408/jpek.v3i1.1667

[26] Setyaningsih Rila, Abdullah, Prihantoro Edy, Implementation of Digital Literacy Through E-learning in Learning Process at Pesantren University, Book Proceeding Conference: International Conference of Communication Science Research (ICCSR 2018), p62-65, DOI - 10.2991/iccsr -18.2018.14

[27] Harwiyati, Enny & Rohmawati, Helmia Cipta, Application of the Project Base Learning Learning Model to Improve Learning Achievement in Fantasy Makeup Courses at AKS – AKK Yogyakarta, Socia Akademika Journal Volume 8, No. 1, 20 June 2022. Retrieved fromhttps://aks-akk.e-journal.id/jsa/article/view/178