

SATISFACTION OF THE E-MONPRAKERIN MODEL BASED ON THE ANDROID SYSTEM FOR MONITORING VOCATIONAL STUDENT INTERNSHIPS

Sutikno^{1*}, Baedhowi², Siswandari³, Roemintoyo⁴

^{1*}Science Education, Doctorate Program, Universitas Sebelas Maret, Jl. Ir. Sutami 36A, Surakarta, Indonesia;

^{2,3,4}Teacher Training and Education Faculty, Universitas Sebelas Maret, Jl. Ir. Sutami 36A, Surakarta, Indonesia.

Email: *sutiknofaras@student.uns.ac.id

Article History: Received on 24th March 2020, Revised on 15th May 2020, Published on 6th June 2020

Abstract

Purpose of the study: This study aims to find out the implementation of electronic monitoring of internship (*e-monPrakerin*) in industrial revolution 4.0 and society 5.0 and user satisfaction in using *e-monPrakerin* android-based in monitoring internship of vocational students.

Methodology: The research method is a descriptive survey of the use of *e-monPrakerin* for electronic internship monitoring. Respondents are the teachers at Mondokan 1 Vocational High School as supervisors of the student internship program. The instrument used was the USE questionnaire for *e-monPrakerin* implementation. Data analysis techniques using descriptive analysis with percentages.

Main Findings: The results showed that the use of an *e-monPrakerin* android-based system for electronic internship monitoring 1) good use (74.52%); 2) good ease of use (80.09%); 3) it's easy to learn (84.94%); 4) users are very satisfied (81.97%). Electronic internship monitoring using Android-based *e-monPrakerin* satisfies application users.

Applications of this study: Implementation of research results can be used to monitor students' industrial work practices so that their implementation can be monitored effectively and efficiently.

Novelty/Originality of this study: Facing the disruption era of the industrial revolution 4.0, all activities were carried out by utilizing information technology, at a lower cost and a high level of quality. The *e-monPrakerin* model was created to answer these challenges on the basis of information technology so that it can save costs, be more practical, faster, and of high quality.

Keywords: *e-monPrakerin, Internship, Vocational, Satisfaction, Android.*

INTRODUCTION

The 21st-century economy is characterized by the development of competent and highly competitive human resources; this has become the subject of global competition in the era of the industrial revolution 4.0. The national manufacturing sector must be ready to make major changes in the face of the industrial revolution 4.0 ([Hitchings, 2016](#)). Consequently, new approaches and capabilities are needed to build innovative and sustainable production systems ([Kemenperin, 2018](#)). The effect of the industrial revolution 4.0 is an increase in production efficiency because it uses digital technology and automation, as well as changes in the composition of jobs ([Ustundag & Cevikcan, 2018](#)).

Education is one of the basic needs of humans to carry out their lives, thus it should be an educational program oriented to the needs of the labor market ([Hitchings, 2016](#)). Formal education consists of elementary, secondary, and higher education. At the secondary education level, aimed at creating graduates who are ready to work and able to compete in the job market is a Vocational High School (SMK). Vocational education was created to connect and match learning in schools with industry, which is carried out by way of industrial work practices ([Sutikno et al., 2019](#)).

Industrial Work Practice (Prakerin) is a work activity carried out in the business or industrial world in an effort to improve quality and equip vocational students to prepare human resources following the needs of the job market ([Maertz et al., 2014](#)). Prakerin is part of the vocational engineering education curriculum to facilitate prospective graduates entering the job market. In the process, there are still obstacles in terms of management and assessment. In this new concept, new methods and applications are needed in the potential management process ([Calvo & D'Amato, 2015](#)).

The obstacle in the implementation of an internship is the existence of expertise programs that exist in Vocational High Schools (SMK) do not get a place of internship in the industry closest to the school environment ([Rentzos et al., 2015](#)). To increase the willingness of students in apprenticeships in the industry needed the right solution in the management of industrial work practices, especially monitoring ([Sutikno et al., 2019](#)). This happens because of various obstacles in evaluating apprenticeship activities. On the one hand, it is only as an additional knowledge but on the other hand, has its value ([Liviu & Andreea, 2013](#)).

Facing the disruption of the industrial revolution era 4.0, all activities are carried out by utilizing information technology, at a lower cost and a high level of quality ([Christensen, 1997](#)). The *e-monPrakerin* model was created to answer these challenges on the basis of information technology so as to save costs ([Jeske & Axtell, 2014](#)), be more practical, faster, and of high quality. Advances in information technology make it possible to make big leaps by

collecting more timely, complete, relevant, and high-quality information and using it in more effective ways (Jones & George, 2017).

To answer the ineffectiveness of the Prakerin monitoring, an electronic application that can support these activities is needed. This is as in the study conducted by Calvo & D'Amato (2015), that a new concept is needed in the use of methods and potential applications in managing internships. Other research suggests that electronic apprenticeship with technology is the first step towards the right apprenticeship (Jeske & Axtell, 2014). The use of electronic applications in monitoring industrial work also affects user satisfaction in using the application.

Satisfaction is an attitude that is given based on experience (Lovelock & Wirtz, 2011). It can be said that satisfaction is an assessment of the characteristics or features of using a product. Satisfaction in using electronic applications for monitoring vocational student internships is created through the quality, service, and value provided (Ramsgaard & Østergaard, 2018). This relates to the effectiveness of using the application. Effectiveness is taken from the assessment of application users with five indicators, namely: 1) ease of learning application features, 2) error prevention, 3) speed, 4) ease of remembering functions, and 5) user satisfaction.

Indicators from the aspect of users are grouped into two categories namely: 1) Practical includes indicators of ease of learning features, ease of remembering functions, and prevention of errors while. 2) Effective includes indicators of speed and user satisfaction. This test is intended to measure how the quality of the information system produced so that it can be known practicality and effectiveness of the system developed (Juradin & Purnamawati, 2018).

This article aims to find out: 1) the implementation of electronic labor monitoring (*e-monPrakerin*) in the era of industry 4.0 and society 5.0, and 2) user satisfaction in using android-based *e-monPrakerin* in monitoring vocational student internships. Facing the disruption era of the industrial revolution 4.0, all activities were carried out by utilizing information technology, at a lower cost and a high level of quality (Christensen, 1977).

The *e-monPrakerin* model was created to answer these challenges on the basis of information technology so that it can save costs, be more practical, faster, and of high quality. Advances in information technology make it possible to make big leaps in the way they collect information that is more timely, complete, relevant, and of high quality and uses it in more effective ways (Jones & George, 2017).

METHODS

Research Design

The research method is a descriptive survey in the use of *e-monPrakerin* for monitoring student internships electronically. Respondents involved in this study were 60 teachers in the 1 Vocational High School, Mondokan, as supervisors of the student internship program. The final goal of the *e-monPrakerin* model is a report on student attendance and progress in the implementation of Internship which can be accessed online and at any time by the manager and supervisor. This is very necessary to ensure the prakerin process goes on target and helps make quick and appropriate decisions in case of irregularities or problems in the process.

Instrument and Procedures

The instrument used was the USE questionnaire (Lund, 2001a; Lund, 2001b) for *e-monPrakerin* implementation. The USE questionnaire consists of aspects of Usefulness, Ease of Use, Ease of Learning, and Satisfaction (Lund, 2001a; Lund, 2001b). USE questionnaire refers to seven levels with a Likert scale model (Gao et al., 2018). The data analysis technique uses descriptive analysis with percentages, and analysis is carried out either on each aspect or on all parameters.

Data Analysis

The data analysis method used is a descriptive analysis technique that is tailored to the purpose of the research that is trying to describe the data as it is (Sugiyono, 2013a; Sugiyono, 2013b). The satisfaction index is determined by calculating scores from each aspect and changing scores into scores with a five-scale criterion that is not good, not so good, quite good, good, and very good. Guidelines for changing scores to a scale of five can be seen in Table 1.

Table 1: Conversion score assessment statement of practical quality score

| Score Percentage (Ps) | Category |
|-----------------------|-------------|
| $0 \leq Ps \leq 20$ | Not good |
| $21 \leq Ps \leq 40$ | Not so good |
| $41 \leq Ps \leq 60$ | Quite good |
| $61 \leq Ps \leq 80$ | Good |
| $81 \leq Ps \leq 100$ | Very Good |

Percentage values (Ps) are obtained using equation (1), i.e.:

$$P_s = \frac{\sum \text{score}}{\text{criteria}} \quad (1)$$

Explanation :

P_s = Percentage of sub-variables

Criteria = highest score \times number of aspects \times number of respondents

Based on the criteria in Table 1, the evaluation model is said to meet the quality criteria if the percentage of results $>61\%$ is suitable for use in management.

RESULT AND DISCUSSION

Implementation of Electronic Monitoring Internship (*e-monPrakerin*)

Monitoring is defined as an activity cycle that includes the collection, review, reporting, and action of information on a process that is being implemented. Generally, monitoring is used in checking between performance and predetermined targets. Monitoring has two basic functions that are related, namely compliance and performance. Compliance monitoring is carried out to ensure the suitability of the work in accordance with agreed standards. Performance monitoring is the collection of data to check progress against targets, to determine how well progress has been expected against the results. In addition, performance monitoring goes beyond compliance with regulations and often involves measuring the "effect" of activities (Mercy, 2005).

Monitoring is also an activity aimed at providing information about the causes and consequences of a policy that is being implemented. Monitoring is carried out when a policy is being implemented. Monitoring is needed so that early mistakes can be immediately identified and corrective actions can be taken, thereby reducing the greater risk (Dunn, 2004). Thus the purpose of monitoring is to (a) keep the policy being implemented in accordance with the goals and objectives, (b) find errors as early as possible so as to reduce the greater risk, (c) take action to modify the policy if the monitoring results require it.

Data and information for monitoring are obtained by (a) documentation methods, namely from various activity reports such as annual/monthly reports, (b) survey methods that aim to capture data from stakeholders, especially target groups, (c) field observation methods for observing empirical data in the field and aiming to be more convincing in making judgments about the process of the policy used to complement survey methods, (d) interview methods with interview guidelines that ask various aspects related to policy implementation need to be prepared, (e) mixed methods such as mixed between the documentation and survey methods, or survey and observation methods, or by using the three or even four methods above, (f) the Focus Group Discussion (FGD) method by holding meetings and discussions with various stakeholders. In this way, more valid information will be obtained through cross-checking data and information from various sources.

Monitoring is conducted according to the type of data requirements needed can be classified into (a) compliance (compliance): type of monitoring to determine the level of implementor compliance with established standards and procedures, (b) checking (auditing): type of monitoring to see the extent of resources and service to the target group, (c) accounting (accounting): type of monitoring to calculate social and economic changes that occur after a policy is implemented, (d) explanation (explanation): type of monitoring to explain the differences between the results and policy objectives (Dunn, 2004).

To support conformity with industry, one of the ways is carried out by industrial work practices. The government initiated the application of vocational education that is suitable to connect and match between SMKs and industry. The development of this program also prepares skilled workers who are ready to use in the industry with a target of reaching one million people by 2019 (Kemenperin, 2018). Internship programs with industry as a form of student competency improvement program are carried out in accordance with their fields of expertise (Kemenaker, 2016).

The Internship Program is conducted to make students get to know the industry first and as a stimulus for students to study harder. Students will experience more actual activities in the industry (Shin et al., 2013). In the implementation of the program, several names were given, one of which was Industrial Work Practices (Internship). In general, students rated the industrial internship program as a good thing. This happens because students consider internships to be practical learning activities and produce positive experiences. The factor that determines the success of the internship program is the involvement of all parties in managing and carrying out their respective roles (Renganathan et al., 2012).

Industrial work practices become part of the vocational engineering education curriculum to facilitate prospective graduates entering the job market. In the process, there are still obstacles in terms of management and assessment. In this new concept, new methods and applications are needed in the potential management process (Calvo & D'Amato, 2015). The obstacle in the implementation of an internship is the existence of expertise programs in vocational schools that do not get a place of internship in the industry closest to the school environment. To increase the willingness of students in apprenticeships in the industry needed the right solution in the management of industrial work practices, especially

monitoring. This happens because of various obstacles in evaluating apprenticeship activities. On one hand, it is only as an additional knowledge but on the other hand has its own value (Liviu & Andreea, 2013).

The implementation of the Internship to be more effective in line with the expectations of the implementation of vocational education, in its implementation must be managed properly (Kim et al., 2012). Management is a process of planning, organizing, coordinating, and controlling resources to achieve goals effectively and efficiently. The management is in accordance with education management standards by primary and secondary education units which include: (1) program planning; (2) work plan implementation; (3) supervision or evaluation (Kemendikbud, 2007).

During this time the implementation of the apprenticeship is quite far from the school there are obstacles related to monitoring industrial work practices at Vocational Schools there are still many schools that monitor the program conventionally. Monitoring activities carried out by visiting each industry where students carry out an internship. Managing prakerin monitoring administration requires changes along with the development of internet users which shows a very drastic change. Internship monitoring must be more effective and efficient by utilizing technological developments.

Management and monitoring carried out with conventional processes, namely direct monitoring and paper-based reports can take up time, energy, and costs. Only around 25-30% of schools are accompanied by other technological facilities such as telephone, SMS, and social media without anyone using a special application. The survey on the effectiveness of monitoring mentoring teachers, vice principals in the curriculum field, and deputy principals in the field of public relations in the field of industrial work practices conveyed that the implementation of Prakerin monitoring has not been effective to date. The percentage of 13% monitoring effective industrial work practices, 77% less effective, and 10% ineffective. The effectiveness is based on the evaluation of respondents on the timeliness of monitoring, speed of getting information, data certainty, and implementation costs.

Prakerin good monitoring and carried out easily and efficiently in the context of monitoring student activities can be assisted with a variety of relevant media. This is needed to increase the effectiveness of monitoring industrial/internship work practices. Internship monitoring is effective if it can be done easily, quickly, on time, communication with students and the industry runs smoothly.

Electronic monitoring provides new insights into apprenticeship supervision compared to conventional apprenticeship supervision. This is the right step in order to increase the effectiveness of apprenticeship monitoring (Jeske & Axtell, 2014). Effective implementation of Industrial Work Practices must be managed properly (Renganathan et al., 2012). During the Internship period, it is not easy to periodically check the progress and status of each student. In addition, the relatively short internship time is a problem for students to take experience in the industrial field (Shin et al., 2013).

During the prakerin monitoring in general or as much as 67% is done every 2 weeks. This happens because conventional monitoring is done internally or manually. This is the cause of the difficulties (73.3%) of the internship advisers in obtaining information about the state of internship participants in industrial locations. The requirement that is needed in the apprenticeship activities is effective monitoring.

The negative impact if monitoring is less effective is the lack of success of the internship in improving student competency. This happens because the activities of the apprenticeship are not monitored according to plan. In general, 60% of school principals agreed and 33.3% of principals strongly agreed by suggesting the implementation of monitoring with electronic applications so that monitoring of apprenticeship was more effective.

User Satisfaction in Using *e-monPrakerin*

Measurement of user satisfaction in using *e-monPrakerin* using USE questionnaire, which consists of aspects of Usefulness, Ease of Use, Ease of Learning, and Satisfaction. The results of the analysis on the aspect of usefulness are presented in Figure 1.

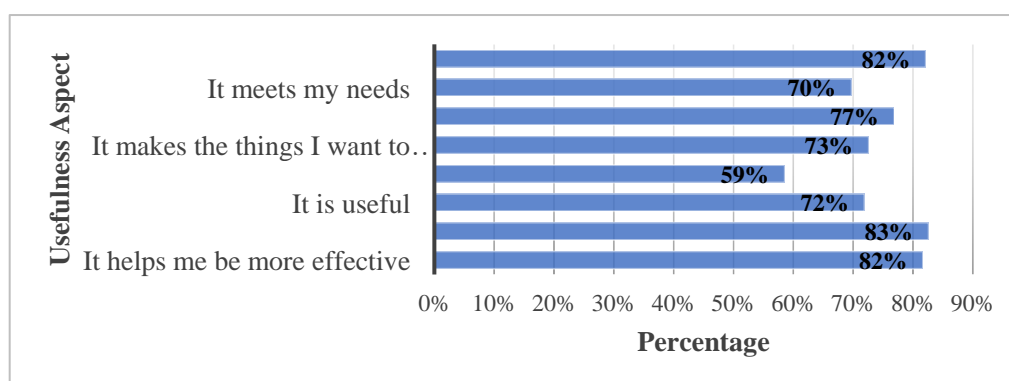


Figure 1: Analysis Results on the Usefulness Aspect

The usefulness aspect consists of eight question items. The average analysis result on the usefulness aspect is 74.52%, this result shows that the user is using *e-monPrakerin* in the Usefulness aspect is in a good category. The results of the analysis on aspects of ease of use are presented in Figure 2.

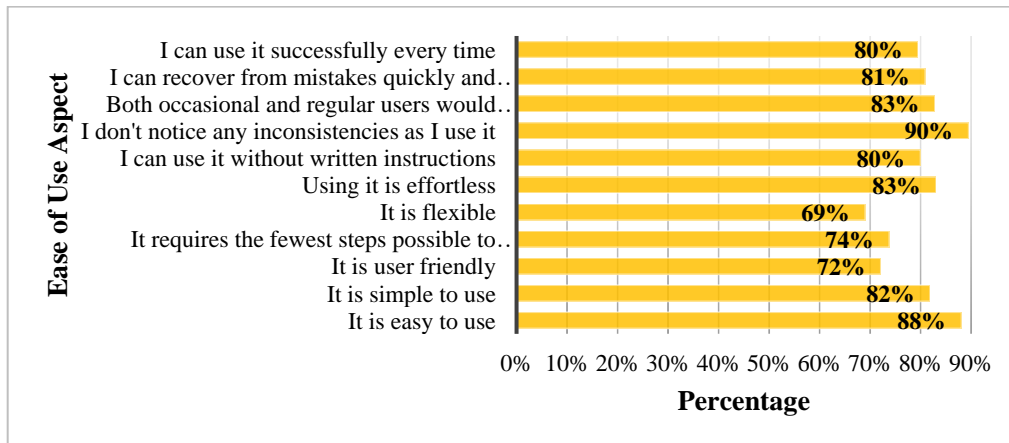


Figure 2: Analysis Results on the Ease of Use Aspect

The ease of use aspect consists of eleven question items. The average analysis result on the ease of use aspect is 80.09%; this result shows that the user is using *e-monPrakerin* on the ease of use aspect is in a good category. The results of the analysis on aspects of ease of learning are presented in Figure 3.

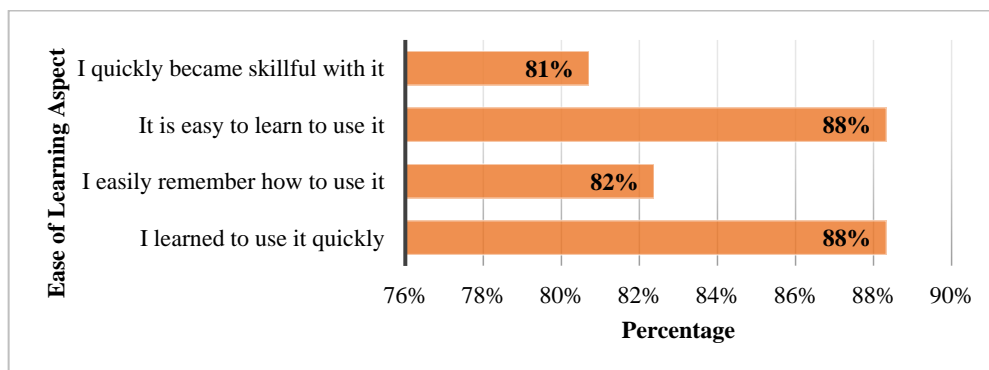


Figure 3: Analysis Results on the Ease of Learning Aspects

The ease of learning aspect consists of four question items. The mean analysis results on the aspect of ease of learning amounted to 84.94%, these results indicate that the user in using *e-monPrakerin* in the aspect of ease of learning is in the very good category. The results of the analysis of the satisfaction aspect are presented in Figure 4.

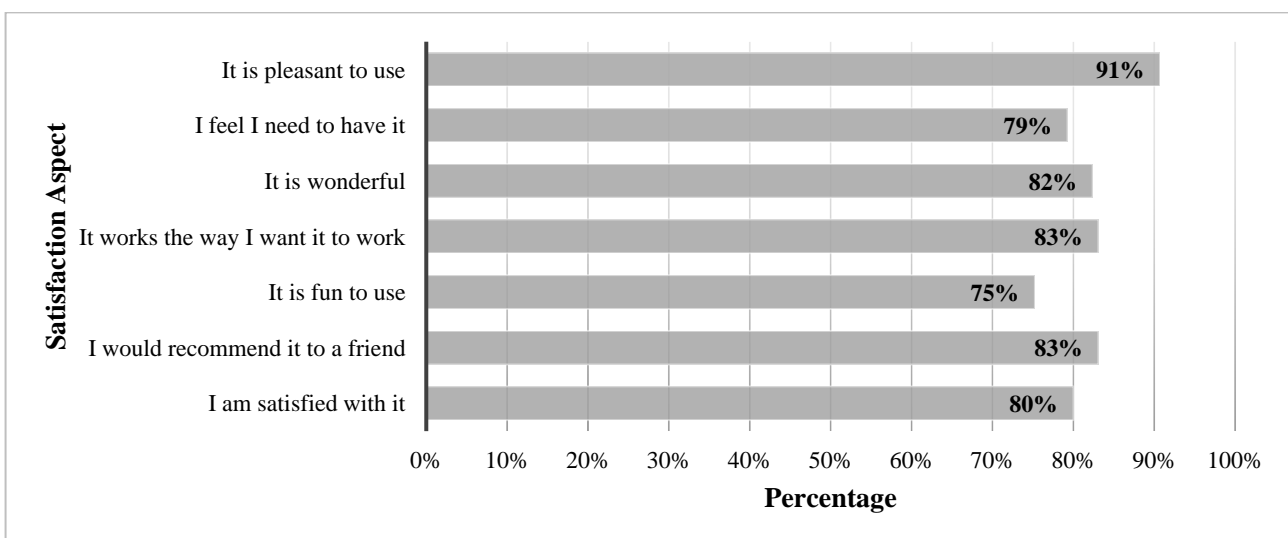


Figure 4: Analysis Results on Satisfaction Aspects

The Satisfaction aspect consists of seven question items. The average analysis result on the satisfaction aspect is 81.79%, this result shows that the user is using *e-monPrakerin* on the satisfaction aspect is in the very good category. The overall analysis results on the aspects of Usefulness, Ease of Use, Ease of Learning, and Satisfaction of 79.69%, these results indicate that user satisfaction in using *e-monPrakerin* is in a good category. User satisfaction in using *e-monPrakerin* has met the standards of effectiveness, monitoring management, and following the needs of the industrial revolution 4.0 in the use of innovative technology.

The results of this study are in line with the results of research by [Renganathan et al., \(2012\)](#), that students rate industrial apprenticeship programs well. Generally, students view learning through practical experience during the internship positively. In addition, factors related to the operation and administration of the organizer and the role played by the host company were also identified as important in determining the success of the industry internship program. In line with the study [Jeske & Axtell \(2014\)](#), said that confirming the emergence of electronic internships in several countries. It also explains the characteristics of this new internship and explains how electronic apprenticeship is compared to traditional apprenticeship, thus providing insights for practitioners and managers.

The results of the theoretical study are also used as a basis for improving the software that has been developed. After some improvements are made, then the software is tested on a larger scale. The test results show that the software developed has met the criteria to be used. Software used in monitoring student internship, using the Android operating system ([Sutikno et al., 2019](#)). This is because the price is very affordable for all people. Android also carries an open system (open source) on the basis of the Linux operating system. The advantages of using the Android operating system: Open operating system (Open Source), has the support of Google's internet service providers, available external storage systems, affordable prices. Lack of use of the Android operating system: requires large storage space, on certain devices the system can freeze (because software and hardware are made separately; different from Apple which specifically makes iOS for devices), must have a G-Mail account and be connected to the internet, there is malware/virus, considering how easy it is to get the OS online ([DiMarzio, 2008](#); [Safaat, 2012](#)).

The development of applications that become software in learning with multimedia is done by developing from an existing operating system. Application development in this study uses the Android operating system. The software is developed by considering the effectiveness of the use of applications in the implementation of learning. Smartphone users mostly operate the Android operating system. Considering the advantages and disadvantages of the existing operating system on a smartphone, the development of applications from the Android operating system is more profitable to be developed in this application.

[Kleinwort et al. \(2018\)](#), found that the LOZ (Learning Factory for Optimized Machining) Android application was developed to support operators by detecting programs, determining program frequencies and spindle speed options for stable machining processes. [Abildinovaa et al. \(2016\)](#), said that both teachers and students expressed their interest in learning to operate and use Android applications. Android applications can help teachers and students in the learning process and organization. The main feature of the developed application is synchronizing user information with the database, processing, and provisioning it to other users.

CONCLUSION

The results showed that the use of an *e-monPrakerin* android-based system for electronic internship monitoring 1) good use (74.52%); 2) good ease of use (80.09%); 3) it's easy to learn (84.94%); 4) users are very satisfied (81.97%). Electronic internship monitoring using Android-based *e-monPrakerin* satisfies application users. These results indicate that user satisfaction in using *e-monPrakerin* is in a good category. Software used in monitoring student internship, using the Android operating system. This is because the price is very affordable for all people. Android also carries an open system (open source) on the basis of the Linux operating system. This is an advantage of using the Android operating system. User satisfaction in using *e-monPrakerin* has met the standards of effectiveness, monitoring management, and following the needs of the industrial revolution 4.0 in the use of innovative technology.

LIMITATION AND STUDY FORWARD

The effectiveness of monitoring Prekerin can support the success of increasing competency, student internships. Effectiveness is closely related to the comparison between the level of achievement of objectives with the plans that have been prepared previously or the comparison of real results with planned results. For this reason, in subsequent studies, the application of *e-monPrakerin* can be used as a reference for monitoring student work not only in industrial work practices. But also in other practices. Effectiveness is closely related to technical rationality, and it is often measured in units of products or services or financial value.

ACKNOWLEDGMENT

The author would like to thank the Universitas Sebelas Maret (UNS) Surakarta, and the ministry of education and culture for granting research permission to the author. We would also like to thank all colleagues at the Mondokan 1 Vocational High School (SMK).

AUTHORS CONTRIBUTION

The first author contributed to the selection of research topics, data collection, and data analysis. The second and third authors contributed to increasing the depth of discussion. Whereas the fourth author contributes to the improvement provided by reviewers, increasing the depth of discussion and presentation of data.

REFERENCE

1. Abildinova, G. M., Alzhanova, A. K., Ospanovab, N. N., Taybaldievac, Z., Baigojanovaa, D. S., & Pashovkina, N. O. (2016). Developing a mobile application “educational process remote management system” on the android operating system. *International Journal of Environmental and Science Education*, 11(12), 5128–5145.
2. Calvo, R., & D’Amato, R. (2015). A Collaborative Method of Enhancing Internships Evaluation through Stakeholders’ Alignment. *Procedia Engineering*, 132, 167–174. <https://doi.org/10.1016/j.proeng.2015.12.466>
3. Christensen, C. M. (1997). *The innovator’s dilemma : when new technologies cause great firms to fail*. Boston: Harvard Business School Press.
4. Christensen, C. M. (1977). *The innovator’s dilemma: When new technologies cause great firms to fail*. Boston: Harvard Business School Press.
5. DiMarzio, J. F. (2008). *Android a Programmer’s Guide*. New York: McGrawHill Company.
6. Dunn, W., N. (2004). *Public Policy Analysis An Introduction*. Upper Saddle River: Pearson Prentice Hall.
7. Gao, M., Kortum, P., & Oswald, F. (2018). Psychometric evaluation of the USE (usefulness, satisfaction, and ease of use) questionnaire for reliability and validity. *Proceedings of the Human Factors and Ergonomics Society*, 3, 1414–1418. <https://doi.org/10.1177/1541931218621322>
8. Hitchings, M. G. (2016). Career Opportunities : Connecting Design Students With Industry. *Procedia - Social and Behavioral Sciences*, 228(June), 622–627. <https://doi.org/10.1016/j.sbspro.2016.07.095>
9. Jeske, D., & Axtell, C. (2014). e-Internships: Prevalence, characteristics and role of student perspectives. *Internet Research*, 24(4), 457–473. <https://doi.org/10.1108/IntR-11-2012-0226>
10. Jones, Gareth R, & George, J. M. (2017). *Essentials of Contemporary Management*. New York: McGraw-Hill Education.
11. Juradin, M. A. M., & Purnamawati (2018). *Sistem Informasi Monitoring Praktek Kerja Industri Berbasis Web*. Makasar.
12. Karem, Mohammed A., Mahmood, Yazen N., Jameel, Alaa S., Ahmad, Abd Rahman (2019). The Effect of Job Satisfaction and Organizational Commitment on Nurses' Performance. *Humanities & Social Sciences Review*. 7(6), 332-229. <https://doi.org/10.18510/hssr.2019.7658>
13. Kemenaker (2016). *Permenaker no. 36 tahun 2016 tentang Pemagangan Dalam Negeri*. Jakarta: Kemenaker.
14. Kemendikbud, RI. (2007). *Permendikbud no. 19 tahun 2007 tentang Standar Pengelolaan Pendidikan*.
15. Kemenperin (2018). *Making Indonesia 4.0*. Jakarta: Kemenperin.
16. Kim, Eyoung B., Kim, Kijoo., Bzullak, Michael (2012). A survey of internship programs for management undergraduates in AACSB-accredited institutions. *International Journal of Educational Management*, 26(7), 696–709. <https://doi.org/10.1108/09513541211263755>
17. Kleinwort, R., Semm, T., Falger, P. M., & Zaeh, M. F. (2018). Integration of an Android Application into the Learning Factory for Integration an Android into the Learning Factory for Manufacturing of Optimized Machining. *Procedia Manufacturing*. <https://doi.org/10.1016/j.promfg.2018.03.153>
18. Liviu, N. M., & Ana-Andreea, M. (2013). Issues on Improving Internships in Technical Universities in Romania. *Procedia - Social and Behavioral Sciences*, 84, 1757–1762. <https://doi.org/10.1016/j.sbspro.2013.07.027>
19. Lovelock, C., & Wirtz, J. (2011). *Services Marketing: People, Technology, Strategy* (7th ed.; U. S. River, Ed.). Prentice-Hall.
20. Lund, Arnold M. (2001a). USE Questionnaire: Usefulness, Satisfaction, and Ease of use.
21. Lund, Arnold M. (2001b). Measuring usability with the USE questionnaire. *Usability Interface*, 8(2), 3–6. <https://doi.org/10.1177/1078087402250360>
22. Maertz, C. P., Stoeberl, P. A., & Marks, J. (2014). Building successful internships: Lessons from the research for interns, schools, and employers. *Career Development International*, 19(1), 123–142. <https://doi.org/10.1108/CDI-03-2013-0025>
23. Mercy. (2005). *Design, Monitoring and Evaluation*. Mercy Corp.
24. Ramsgaard, M. B., & Østergaard, S. J. (2018). An entrepreneurial learning approach to assessment of internships. *Education and Training*, 60(7–8), 909–922. <https://doi.org/10.1108/ET-11-2016-0164>
25. Renganathan, S., Ambri Bin Abdul Karim, Z., & Su Li, C. (2012). Students’ perception of industrial internship programme. *Education + Training*, 54(2/3), 180–191. <https://doi.org/10.1108/00400911211210288>
26. Rentzos, L., Mavrikios, D., & Chryssolouris, G. (2015). A two-way knowledge interaction in manufacturing education: The teaching factory. *Procedia CIRP*, 32(C1f), 31–35. <https://doi.org/10.1016/j.procir.2015.02.082>
27. Safaat, N. (2012). *Pemogramaan Aplikasi Mobile Smartphone dan Tablet PC Berbasis Android*. Bandung: Informatika.



28. Shin, Y.S., Lee, K.W., Ahn, J.S., & Jung, J.W. (2013). Development of Internship & Capstone Design Integrated Program for University-industry Collaboration. *Procedia - Social and Behavioral Sciences*, 102(IFEE 2012), 386–391. <https://doi.org/10.1016/j.sbspro.2013.10.753>
29. Sutikno, Baedhowi, Siswandari, & Roemintoyo. (2019). Concept of e-mon prakerin model for internship monitoring in vocational high school. *IOP Conference Series: Earth and Environmental Science*, 243(1). <https://doi.org/10.1088/1755-1315/243/1/012119>
30. Sugiyono. (2013a). *Cara Mudah Menyusun Skripsi, Tesis, Disertasi*. Bandung: Alfabeta.
31. Sugiyono. (2013b). *Metode Penelitian Kuantitatif dan R & D*. Bandung: Alfabeta.
32. Ustundag, A., & Cevikcan, E. (2018). *Springer Series in Advanced Manufacturing Industry 4.0: Managing The Digital Transformation*. <https://doi.org/10.1007/978-3-319-57870-5>