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Socialization of work base learning-based industrial practice platforms for students, vocational teachers, and industrial partners

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Abstract
This community service has a goal, including providing information for students, industry, and academics about the use of work-based learning-based industrial practice platforms. This service uses a structured method, starting with a theory about computer technology, followed by direct practice by the presenters with the concept of direct practice to teach community service participants. The socialization material starts with the explanation of the platform flow and the functions of each feature. The results of this socialization received quite a positive response, Utilization of computer technology with the creation of a work base learning-based industrial practice platform is very helpful in providing administrative management for the independent learning internship program at the independent campus. This community service in the form of socialization received good and positive responses, especially in the design of a work-based learning-based industrial practice platform, which got a score of 3.9, which means that they are very satisfied with the work-based learning platform.

Keywords: *Platform; Industrial practice; Work base learning*

Sosialisasi platform praktik industri berbasis work base learning bagi mahasiswa, guru SMK, dan mitra industri

Abstrak
Pengabdian masyarakat ini memiliki tujuan untuk memberikan informasi bagi mahasiswa, industri, dan akademisi tentang penggunaan *platform* praktik industri berbasis *work base learning*. Pengabdian ini menggunakan metode terstruktur yakni dengan diawali teori tentang teknologi komputer, dilanjutkan dengan praktik langsung dengan konsep *direct practice* untuk mengajarkan kepada peserta pengabdian kepada masyarakat. Materi sosialisasi di mulai dari pemaparan alur *platform* dan fungsi pada masing-masing fitur. Hasil dari sosialisasi dengan dibuatnya *platform* praktik industri berbasis *work base learning* ini sangat membantu dalam memberikan pengelolaan secara administrasi pada program magang merdeka belajar kampus merdeka. Pengabdian masyarakat berupa sosialisasi ini mendapatkan tanggapan baik dan positif, terutama dalam desain *platform* praktik industri berbasis *work base learning* yaitu mendapatkan skor 3,9 yang berarti sangat puas dengan dibuatnya platform praktik industri berbasis *work base learning*.

Kata Kunci: Platform; Praktik industri; *Work base learning*

1. Introduction

The role of information technology in education is needed today as a means of up-to-date information. Besides being able to help students in learning, they also have quite an influential role for teachers, especially in the use of facilities to enrich teaching abilities (Budiman, 2017). Administration is defined as the whole process of cooperation between two or more human beings based on a certain rationality to achieve predetermined goals which are currently the main thing in education (Nuari, 2014). The role of vocational education and vocational secondary education cannot be separated from the influence of technological advances at this time (Sukir, 2019). At school or campus, many students do a lot of practicums to improve their abilities in accordance with their respective fields, so that they will be quickly absorbed in the field of work. Students will carry out school program activities that are in direct synergy with industry, namely industrial work practices to measure students' skills and competencies during practicum.

Vocational education is always tied to honing student competencies in each field, both internally and externally, such as industrial work practices. It certainly has a long process starting from specialization guidance, place recommendations, submissions to companies, activity agendas, to report writing. Generally, in carrying out industrial work practices, students will undergo a mentoring process with one or more supervisors who have competencies related to the research field to be carried out. The registration model of industrial practice and conventional guidance still has many obstacles in practice, such as difficulties in arranging to meet with industry leaders to ask whether or not the place of industrial practice is still there for six months, in addition to the time of the guidance process, the process of recording the progress of activities. Industrial practice activities that are not carried out consistently can have a negative impact. So that this has an impact on the delay in the process of working on industrial work practices (Yuliani & Yuniarsih, 2018).

Industrial work practices are companies or agencies that collaborate with schools or campuses. Companies and internships can only accept apprentices at most 30% of the total number of employees, by neatly organizing industrial practice activities between participants and the company or agency where the internship is, all parties can benefit from industrial work practices (Arifin, 2014). Through a work-based learning-based industrial practice platform that is developed in a cutting-edge manner by presenting industry information as a place for industrial practice, interns can easily choose an industrial place from home without having to come to the company. After registration, the documents needed to complete the administration can be uploaded on the platform. If it has been uploaded, it can wait for confirmation from the industry.

From the verification results, apprentices can see the results of acceptance from the system. Implementation and monitoring can be done through the system platform. Updates about industrial work practices can be done on the platform via Android. Vocational education is everything that is done by vocational education actors that affect individuals, groups and communities that have been planned so that they can do what they want (Notoatmodjo, 2003).

Education also feels the benefits and conveniences provided by information technology. Evidence from the application of this information technology in education that has been applied by several schools is the concept of learning to use the internet to connect learning communication between students and teachers. The problem that is often

encountered by the industry is the large number of requests for internships from vocational high school students and even higher education or vocational education who register during working hours which causes employees' office hours to be inefficient because they meet students or students regarding this matter. On the other hand, students or students will indirectly move to look for industrial internships, from one industry to another, making it less efficient. For this reason, the automotive engineering education study program develops a platform that can assist the process of industrial work practice activities to register and monitor problems faced by students during industrial work practice activities. The industrial work practice supervisor for students can monitor the internship participants once a month which is done online. The second problem that often occurs during industrial work practices is that students do not enter industrial work practices without prior permission from the field supervisor, students are late for entry, students do not do the assignments given by industrial work practices. As a result, industrial work practice students cannot be monitored directly and have the potential to be returned to school if the problem is slow to handle. So, it is necessary to create a work-based learning-based industrial practice platform so that the efficiency of internship administration can run smoothly and effectively.

To solve this problem, the community service team developed a work-based learning platform to assist the school in monitoring the problems faced by participants during their industrial work practices. The work base learning (WBL)-based industrial practice platform in monitoring the problems of the industrial work practice participants will be developed using the PI-WBL Prototype. This model is considered a good approach to assist interns and industry in understanding and implementing industry practices (Hargiyanto, 2007). So that this platform is considered suitable by the service team in developing industrial internships.

The low competence of graduates of automotive engineering education students in the field of practical competence. In fact, students must be prepared professionally in teacher-printing institutions. If you are still not professional, then there must be certain training before becoming a teacher. So far, one way to train the professional competence of automotive students is by having training in one place. However, much of the training that has been done so far is only theoretical. This program offers a work-based learning (PI-WBL) Industrial practice platform for automotive engineering students. In addition, in making the PI-WBL platform, it also integrates the existing education and training of universities with those in the industry.

For students, when integrating on campus and in industry, it will make students understand faster in terms of professional abilities. The objectives of this program include mapping and analyzing the extent to which students are prepared for industrial practice or internships. The problem of the low competence of automotive teachers is one of the problems of education in Indonesia, so it must be resolved immediately by developing a model platform and applying the PI-WBL platform that has been created. The solution offered in this program is the creation of a work-based learning (PI-WBL) industrial practice platform. This platform serves as a Penta helix connector between universities, industry, partners and the community to apply all activities related to increasing link and match between the industrial world and the world of education.

2. Method

The implementation of this service is carried out from August 1st to October 30th, 2022 for three months in Purworejo as the main campus and partner addresses located in 6 city districts, namely Purworejo, Yogyakarta, Kebumen, Jakarta, Semarang and Magelang with industries namely PT KAI Persero Kutoarjo, PT Bumen Redja Abadi Kebumen, PT Bumen Redja Abadi Magelang, PT Astra International Daihatsu Cirebon, PT Puspa Jaya Yogyakarta, PT Metindo Era Sakti Bekasi, PT Kusuma Mulya Group, PT Samudera Perdana Semarang, PT Mitsubishi Lautan Berlian Jakarta, PT Nasmoco Magelang, and PT Suzuki Ungaran Semarang. As for partners in the academic field, they collaborate with Yogyakarta State University and Ahmad Dahlan University. The method of implementing this community service (PKM) is through stage 1 socialization of computer technology in the form of platform design drawings in the form of mockups which will later be implemented on the work-based learning-based industrial practice platform as shown in Figure 1.

Figure 1. Initial mockups or home platform PI-WBL

The combination of theory and practice is an expected step from creating a work-based learning-based industrial practice platform (WBL) (Bahrudin et al., 2020; Werdani et al., 2020). Participants in carrying out this activity are asked to use and check the contents of the PI-WBL platform with a computer or laptop.

The initial stage was carried out by collecting data on practitioners and academics participants to be able to provide input in the development of the PI-WBL platform, then an invitation was sent from the service team for the automotive engineering education study program at Muhammadiyah University of Purworejo for workshops or meetings to provide input in developing the content show on Figure 2.

Figure 2. Workshop on using the PI-WBL

Stage 2, after the workshop and there were several responses from the new participants, the platform was repaired referring to the existing input responses. As the main speaker from partners, namely PT Kusuma Kusuma Grup- Excelent Studio. The resource person will explain about the mockups of the PI-WBL platform and explain in detail the flow that will be followed. As a reference for the development of the PI-WBL platform, a model transformation workshop will be conducted so that the platform built makes it easier and in accordance with the stages of industrial practice.

From the existing input and improvements have been made, namely the addition to the weekly reporting system. Then in stage 3, a trial of the use of the platform is carried out to students of the automotive engineering education study program (Figure 3).

Figure 3. Trial of PI-WBL

From the product trial process, input data was obtained from several students regarding the number of photos and videos that must be uploaded in the system as evidence of the daily journal. Through this trial activity, the service team obtained directly from the respondents about the obstacles or obstacles from students (Figure 4). To obtain the expected amount of data, the service team used a data collection instrument in the form of a questionnaire.

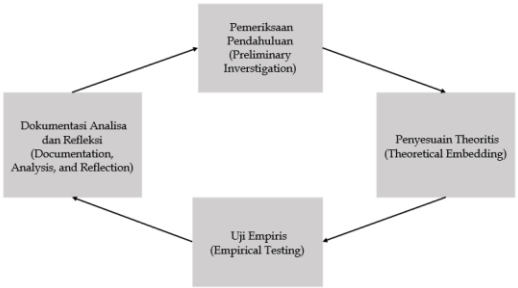

Figure 4. Flow of the PI-WBL platform development service activities

3. Result and discussion

The work-based learning-based industrial practice platform socialization activity was carried out at the Dafam signature Kulon Progo hotel on 27 October 2022. In this activity the community service team wanted to convey to 20 students, academics in this case lecturers, as well as the business and industry world. Implementation is carried out by exposing the platform to socialization participants in detail and in detail. Next, a discussion was held on how to implement technically using the PI-WBL platform.

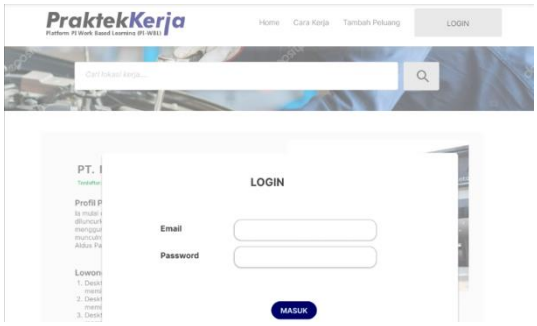

Figure 5. Registration and login

The service team plans a discussion after the socialization so that the platform can be implemented smoothly when it has been used by many users, show on Figure 5. This activity received full support from implementing partners, namely Nasmoco Mlati, Yamaha Sumber Baru Motor, Nusantara Sporing, and Bumen Redja Abadi Magelang. This activity is carried out on Wednesdays starting from 09.00-14.00. This activity is expected to be applicable so as to make it easier for participants to master the PI-WBL platform. This activity is carried out in several stages as follows.

3.1. Initial steps of opening

Speech of the Vice Chancellor I of the University of Muhammadiyah Purworejo in Figure 6, with initiating socialization activities as a coach so that these activities and outcomes impact on the main performance indicators of higher education.

Figure 6. Speech by the vice chancellor I

3.2. Delivery of work base learning (WBL) base industrial practice platform materials

The theoretical material is presented before the start of the discussion. After the first speaker, namely Ibnu Siswanto, Ph.D. and speaker 2, namely Murhadi, M.Eng. explaining the technical industrial practice and how the form of access to running the platform in industrial practice will also help intensively what is not yet understood in using the WBL-based industrial practice platform by automotive engineering education students (Figure 7).

Figure 7. Technical assistance in using the PI-WBL platform

3.3. Evaluation of work base learning-based

Questionnaires are given at the end of the event, to find out the extent of the participants' responses to the ongoing activities. Based on the results in Figure 8, it can be stated that the benefit of socialization for participants is 3.8, the use of technology is 3.7, collaboration with the Business World and Industry & Academics is with a score of 3.6, Design of industrial practice platform based on work base learning 3.9 and satisfaction participants amounted to 3.6.

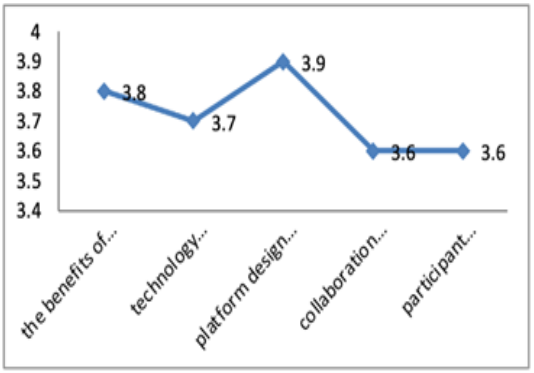

Figure 8. Responses of participants in the PI-WBL platform socialization

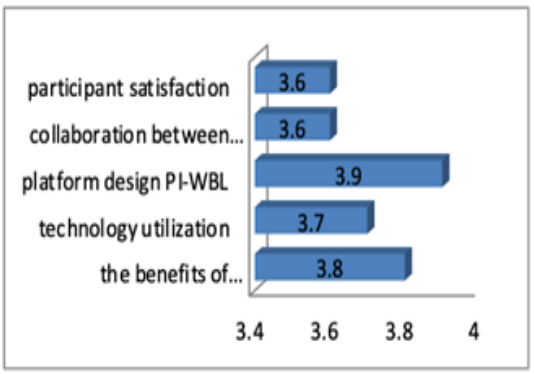

Figure 9. Evaluation of PI-WBL socialization activities

In Figure 9, it can be stated that the evaluation that received the best response was the design of the work-based learning-based industrial practice platform. From the achievement of developing this platform, it can be mass used and well received by students, academics, and practitioners. The activity ended with a closing by the service team for the automotive engineering education study program.

4. Conclusion

The success of this community service program aims to provide information for students, industry, and academics about the use of work-based learning-based industrial practice platforms. The results of this socialization received quite a positive response, starting from the participants' satisfaction which was quite high, seen from the questionnaires that had been distributed at the end of the activity. Utilization of computer technology with the creation of a work base learning-based industrial practice platform is very helpful in providing administrative management for the independent learning internship program at the independent campus. This community service in the form of socialization received good and positive responses, especially in the design of a work-based learning-based industrial practice platform, which got a score of 3.9 which means very satisfied with the industrial practice platform – work base learning. And the impact on students of the automotive engineering education program is to maximize this platform as a media tool to facilitate and improve internship management as well as provide motivation to stay enthusiastic about industrial internship activities.

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Bibliography

Arifin, M. (2014). Analisa dan Perancangan Sistem Informasi Praktek Kerja Lapangan Pada Instansi/Perusahaan. *SIMETRIS: Jurnal Teknik Industri, Mesin, Elektronik dan Ilmu Komputer*, *5*(1). https://doi.org/10.24176/simet.v5i1.130

Bahrudin, A., Widdiyanti, & Wahyono. (2020). Pemberdayaan Masyarakat Melalui Pengembangan Desain Produk Anyaman Mansiang di Jorong Taratak Nagari Kubang Kecamatan Guguak, Kabupaten Limapuluh Kota. *JPPM: Jurnal Pengabdian Dan Pemberdayaan Masyarakat*, *4*(1). https://doi.org/10.30595/jppm.v0i0.3146

Budiman, H. (2017). Peran Teknologi Informasi dan Komunikasi dalam Pendidikan. *Al-Tadzkiyyah: Jurnal Pendidikan Islam*, *8*(1). https://doi.org/10.24042/atjpi.v8i1.2095

Hargiyanto, P. (2007). *Strategi Pembelajaran pada Kegiatan Magang di Industri Kerajinan Logam di Kotagede*.

Notoatmodjo, S. (2003). *Pengembangan Sumber Daya Manusia*. Rineka Cipta.

Nuari, N. (2014). Perancangan Aplikasi Layanan Mobile Informasi Administrasi Akademik Berbasis Android Menggunakan Webservice (Studi Kasus Reg. B Universitas Tanjungpura). *Justin: Jurnal Sistem dan Teknologi Informasi*, *2*(1), 1–6.

Sukir. (2019). Kelayakan E-Modul Berbasis Android Untuk Mendukung Pembelajaran Aplikasi PLC Sebagai Pengendali Mesin Pengisi dan Penutup Botol Otomatis

di SMK. *Jurnal Edukasi Elektro*, *3*(2). https://doi.org/10.21831/jee.v3i2.28788

Werdani, R. E., Kurniawati, N. I., Sukoco, J. B., Windriya, A., & Iskandar, D. (2020). Pelatihan Pemasaran Produk Homemade Melalui Sosial Media. *JPPM: Jurnal Pengabdian Dan Pemberdayaan Masyarakat*, *4*(1). https://doi.org/10.30595/jppm.v4i1.4655

Yuliani, L., & Yuniarsih, T. (2018). Influence of Industrial Work Practices and Learning Achievements on Students Work Readiness. *Proceedings of the 1st International Conference on Economics, Business, Entrepreneurship, and Finance (ICEBEF 2018)*. https://doi.org/10.2991/icebef-18.2019.45

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