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TPACK-Based Learning Management Training for Batch 2 Pekerti University of Bengkulu

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Abstract

This activity aims to train lecturers in managing TPACK-based learning through the PEKERTI (Basic Instruction Technique Skills Improvement) Batch 2 2023 program.The activity was carried out in March 2023 at Bengkulu University, with a total of 39 participants in the training who were lecturers from different tertiary institutions. The research instrument used was a closed questionnaire with 4 answer choices. The data analysis technique used is descriptive statistical analysis. PEKERTI participant response analysisrelated to training activitiescarried out on the data obtained in the form of a percentage. Percentages are obtained based on modified Likert Scale calculations. The results showed that more than 50% of the respondents were in the Strongly Agree category based on the guidelines in table 4 of the Likert scale interpretation. As for the disagree and strongly agree categories, the number is 0 respondents. This means that the respondents who were the sample in this study only gave answers that strongly agreed and agreed to the 19 positive statements submitted in the questionnaire developed with reference to PEKERTI batch 2 activities in 2023 at the University of Bengkulu. So, it can be concluded that the TPACK-based learning management training in Pekerti Batch 2 at the University of Bengkulu received a positive response from the participants.

Keywords: *Learning Management, Pekerti, Tpack, Training*

A. Introduction

Since the Government no longer issues Deed V certificates for lecturers as a form of coaching and pedagogical development, lecturers can take part in a replacement program, namely the Improvement of Basic Instructional Technique Skills (PEKERTI)[1].

In education 4.0 it is important to be able to adapt to various models, media and learning methods. This is because education 4.0 places demands on teachers to be able to master various technological developments in the teaching and learning process [2]–[5]. The problems faced in learning in Indonesia today include many teachers who use technology in learning, but do not pay attention to pedagogical education. This TPACK-based learning can then become one of the components as a complement in supporting learning using technology that still pays attention to pedagogic aspects [6], [7]. Because in addition to the use of technology as a learning medium, in the TPACK framework, pedagogy is an important aspect that needs to be considered in learning activities [8]–[10].

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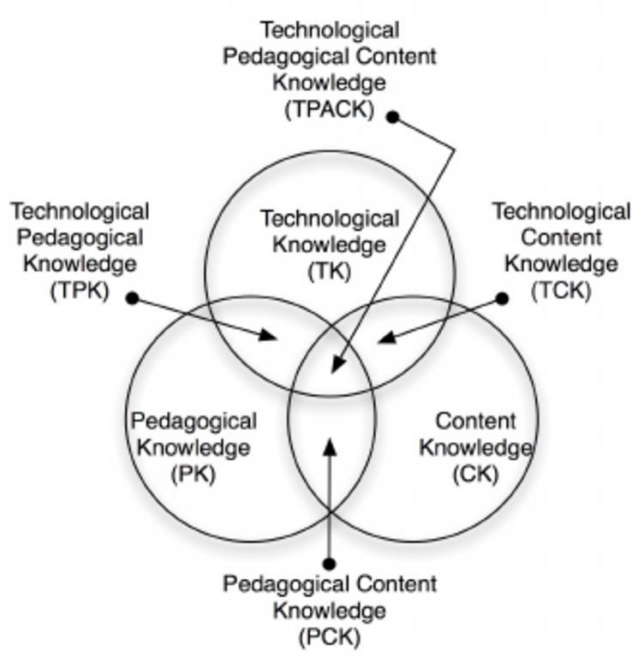

Figure 1. TPACK Study (Source: www.researchgate.net)

TPACK is the knowledge needed to integrate technology in learning [11], [12]. The three main studies in TPACK include technological knowledge, content knowledge, and pedagogical knowledge, with these three things helping teachers to meet learning objectives better [13], [14]. Through the TPACK approach the teacher is able to master and integrate pedagogical competencies, knowledge and technology so that learning is effective, innovative and can improve student learning outcomes [15], [16].

Given the important role of technology in current learning and the importance of knowledge about how to integrate technology in learning while still paying attention to the pedagogic side, the PEKERTI activity batch 2 in 2023 at Bengkulu University takes the themeTPACK-based learning management.

B. Research Methods

This activity aims to train lecturers in managing TPACK-based learning through the PEKERTI (Basic Instructional Engineering Skills Improvement) program.The activity was carried out in March 2023 at Bengkulu University, with a total of 39 participants in the training who were lecturers from different tertiary institutions. The research instrument used was a closed questionnaire with 4 answer choices. The data analysis technique used is descriptive statistical analysis. PEKERTI participant response analysis related to training activities carried out on the data obtained in the form of a percentage. Percentages are obtained based on modified Likert Scale calculations. With a Likert scale, the variables to be measured are translated into variable indicators. Furthermore, these indicators are used as guidelines in compiling items in the form of questions or statements. Instrument items are given quantitative values as in table 1 below:

Table1. Calculation of the Likert Scale

Evaluation	Scale Value
Strongly agree	4
Agree	3
Don't agree	2
Strongly Disagree	1

The questionnaire was tested for validity and reliability using SPSS with the following conditions: Valid if r_{count} is greater than r_{table} value ($r_{count} > r_{table}$), Invalid: if r_{count} is less than r_{table} value ($r_{count} < r_{table}$), Reliable if cronbach's alpha value > 0.60, and Not Reliable if Cronbach's alpha value < 0.60 [17]. The following are the results of testing the validity and reliability of the instrument.

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Table 2. Instrument Validity Test Results

Item Number	r Count	r Table	Information
1	0.783094		Valid
2	0.712486		Valid
3	0.758464		Valid
4	0.60914		Valid
5	0.79788		Valid
6	0.621679		Valid
7	0.517169		Valid
8	0.731347		Valid
9	0.720741		Valid
10	0.651331	0.3160	Valid
11	0.918865		Valid
12	0.826498		Valid
13	0.918865		Valid
14	0.880982		Valid
15	0.885767		Valid
16	0.783994		Valid
17	0.803293		Valid
18	0.887978		Valid
19	0.712757		Valid

The table above shows that all items in the instrument are valid, meaning that all items can be used to measure what is to be measured.

Table 3. Reliability Statistics

Cronbach's Alpha	N of Items
.960	19

The table above shows that the instrument used is reliable because it has a Cronbach alpha value greater than 0.60.

Analysis of the results of PEKERTI participants' responses was carried out quantitatively using the following formula.

$$p = \frac{n}{N} \times 100\%$$

where P is the percentage of the results of the questionnaire analysis, n is the total score of the assessment, and N is the maximum possible score. For the Likert scale, the score interpretation model can be seen in the following table.

Table 4. Interpretation of the Likert Scale

Percentage (%)	Category
0 % - 25 %	Strongly Disagree
26 % - 50 %	Don't agree
51 % - 75 %	Agree
76 % - 100 %	Strongly agree

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C. Result and Discussion

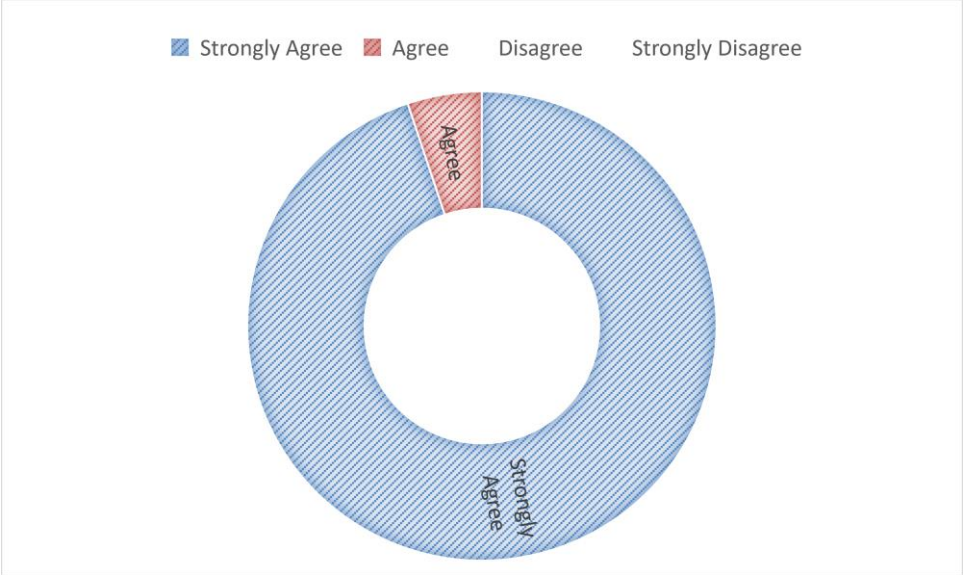

Figure 2. PEKERTI Participant Response Analysis Results

From the picture above, it can be seen that more than 50% of respondents are in the Strongly Agree category based on the guidelines in table 4 of the Likert scale interpretation. As for the disagree and strongly agree categories, the number is 0 respondents. This means that the respondents who were the sample in this study only gave answers that strongly agreed and agreed to the 19 positive statements submitted in the questionnaire developed with reference to PEKERTI batch 2 activities in 2023 at the University of Bengkulu.

Based on the responses from the PEKERTI participants, which were submitted by the participants through the distributed questionnaires, it was found that the material presented in the training activities was easy to understand, the material presented was clear and very much in line with the training objectives. In terms of the method of delivery, it is known that the method of delivering the material is easy to understand and the methods used in conveying the material are in accordance with the times.

In addition, the delivery of material is carried out in a structured manner and is also supported by practical activities that are easy to follow and well guided so that participants recognize that from PEKERTI activities, participants get many new things.

In terms of technology, PEKERTI participants stated that the technology that was trained to be used in order to support the implementation of TPACK-based learning management is a technology that is easy to operate because it does not require mastery of programming languages. In addition, the technology is also updated with the times.

This training activity encourages PEKERTI participants to be more creative in carrying out the learning process, increases digital literacy, and makes them aware of the importance of technology in today's modern era and about the importance of integration between technology and pedagogy in content development in the world of education. With so many positive sides of the material chosen in this PEKERTI activity, it is necessary to retrain this material so that the understanding gained is not forgotten. For this reason, the existence of a learning tutorial video provided is very helpful for PEKERTI participants.

TPACK-based learning is adaptive learning, meaning that it adjusts to developments in science and technology so that it can be said that this training activity supports the concept of education emphasized in the 21st century where teachers are required to be proficient in applying technology in learning.

D. Conclusion

The results of filling out the response questionnaire conducted by the PEKERTI participants showed that more than 50% of the respondents were in the Strongly Agree category based on the guidelines in table 4 of the Likert scale interpretation. As for the disagree and strongly agree categories, the number is 0 respondents. This means that the respondents who were the sample in this study only gave answers that strongly agreed and agreed to the 19 positive statements submitted in the questionnaire developed with reference to PEKERTI batch 2 activities in 2023 at the University of Bengkulu. So, it can be concluded that the TPACK-based learning management training in Pekerti Batch 2 at the University of Bengkulu received a positive response from the participants.

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References

[1] Saroyo, M. R. J. Runtuwene, and S. O. B. Lombogia, "Pendidikan dan Pelatihan PEKERTI-AA di Universitas Sariputra Indonesia Tomohon," *J. LENTERA (Jurnal Penelit. dan Pengabdi. Masyarakat)*, vol. 1, no. 1, pp. 5–9, 2020.

[2] B. N. Parahita *et al.*, "Optimalisasi TPACK Melalui Insersi Video Pembelajaran Berbasis Pendidikan Anti Korupsi Pada Mata Pelajaran Sosiologi," *Dedik. Community Serv. Reports*, vol. 4, no. 2, pp. 104–120, 2022.

[3] M. Afifulloh and B. Cahyanto, "Analisis Kebutuhan Pengembangan Bahan Ajar Elektronik di Era Pandemi Covid-19," *J. Pendidik. Dasar Indones.*, vol. 6, no. 2, pp. 31–36, 2021.

[4] C. W. Gunawan, E. Risdianto, and D. H. Putri, "Analysis of Need Response to the Development of E - Magazine on Static Fluid Material at Bengkulu City High School," *IJOEM Indones. J. E-learning Multimed.*, vol. 1, no. 2, pp. 52–61, 2022, doi: 10.58723/ijoem.v1i2.50.

[5] V. Penyustia, "Analysis of Response Needs for the Development of Animation Video Learning Media on Dynamic Fluid Materials," vol. 2, no. 1, pp. 83–89, 2023.

[6] M. Mustika and R. Temarwut, "Membangun TPACK Guru IPS Melalui Moodle berbasis Blended Learning dalam Pembelajaran Tatap Muka Terbatas," *J. Jendela Pendidik.*, vol. 2, no. 2, pp. 313–323, 2022, [Online]. Available: https://ejournal.jendelaedukasi.id/index.php/JJP/article/view/215%0Ahttps://ejournal.jendelaedukasi.id/index.php/JJP/article/download/215/75

[7] S. R. Yunus, R. Ramlawati, A. A. Arsyad, and S. Saenab, "Pembuatan Media Pembelajaran Berbasis Canva sebagai Upaya Memaksimalkan Implementasi Pendekatan TPACK bagi Guru di Pesantren Putri Yatama Mandiri," *SMART J. Pengabdi. Kpd. Masy.*, vol. 2, no. 1, pp. 7–16, 2022.

[8] A. Quddus, "Implementasi Technological Pedagogical Content Knowledge (TPACK) dalam Pendidikan Profesi Guru (PPG) PAI LPTK UIN Mataram," *J. Tatsqif*, vol. 17, no. 2, pp. 213–230, 2020, doi: 10.20414/jtq.v17i2.1911.

[9] I. S. Nasution and E. F. S. Siregar, "Implementasi Pendekatan TPACK (Technological Pedagogical Content Knowledge) Bagi Guru SD Muhammadiyah 12 Medan," *Ihsan J. Pengabdi. Masy.*, vol. 3, no. 2, pp. 206–212, 2021, doi: 10.30596/ihsan.v3i2.8136.

[10] U. Furqon Arbianto, W. Widiyanti, and D. Nurhadi, "Kesiapan Technological, Pedagogical And Content Knowledge (Tpack) Calon Guru Bidang Teknik di Universitas Negeri Malang," *J. Tek. Mesin dan Pembelajaran*, vol. 1, no. 2, pp. 1–9, 2018, doi: 10.17977/um054v1i2p1-9.

[11] S. Jauhar, N. Nur, and Sudirman, "Teaching Professional Analisis Penggunaan Media Pembelajaran Wordwall Berbasis TPACK pada Pembelajaran IPS Siswa Kelas V SDS IT Rabbani Kecamatan Tanete Riattang Kabupaten Bone," *Glob. J. Teach. Prof.*, vol. 1, no. 3, pp. 371–378, 2022.

[12] W. T. Lestari *et al.*, "Item analysis of teachnological pedagogical content knowledge (TPACK) in pre-service chemistry teachers using the Rasch Model application," *J. Phys. Conf. Ser.*, vol. 1511, no. 1, pp. 1–11, 2020, doi: 10.1088/1742-6596/1511/1/012043.

[13] Z. Al Farizi, D. Sulisworo, M. H. Hasan, and M. E. Rusdin, "Pengembangan Media Animasi untuk Mendukung Pembelajaran Berbasis TPACK dengan POWTOON pada Materi Torsi SMA Kelas

XI," *J. Penelit. Pembelajaran Fis.*, vol. 10, no. 2, pp. 108–113, 2019, doi: 10.26877/jp2f.v10i2.4017.

[14] A. Desstya, "Validitas Reliabilitas Instrument Technologycal Pedagogical Content Knowledge (Tpack) Guru Sekolah Dasar Muatan Pelajaran Ipa," *AL-ASASIYYA J. Basic Educ.*, vol. 3, no. 1, p. 126, 2018, doi: 10.24269/ajbe.v3i1.1338.

[15] S. N. Hayani and S. Sutama, "Pengembangan Perangkat dan Model Pembelajaran Berbasis TPACK Terhadap Kualitas Pembelajaran Daring," *J. Basicedu*, vol. 6, no. 2, pp. 2871–2882, 2022, doi: 10.31004/basicedu.v6i2.2512.

[16] L. S. Zanthy, A. Yuliani, and E. D. Minarti, "Pelatihan penyusunan perangkat pembelajaran berbasis TPACK menggunakan kurikulum Prototipe," *ABSYARA J. Pengabdi. Pada Masy.*, vol. 3, no. 1, pp. 17–25, 2022, doi: 10.29408/ab.v3i1.5226.

[17] A. K. Budiwibowo and K. Nurhalim, "Pengaruh Motivasi Belajar Terhadap Prestasi Belajar Warga Belajar Kejar Paket C," *J. Nonform. Educ.*, vol. 2, no. 2, pp. 168–174, 2016, [Online]. Available: https://journal.unnes.ac.id/nju/index.php/jne/article/view/6789