



THE EFFECTS OF THE USE OF E-LEARNING ON THE LEARNING INTEREST OF THE EAST JAVA PROVINCE PRINCIPAL STRENGTHENING EDUCATION AND TRAINING

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Abstract

The purpose of this study was to determine the effect of using e-learning on the learning interest of participants in the East Java Province Principal Strengthening Education and Training program, as this training was the first time it was conducted online. The type of research employed is quantitative, utilizing random sampling. The research method used is experimental. The study included 86 training participants. The study consists of 30 training classes, with each class having 2-3 participants as samples. The data collection method in this study used a questionnaire distributed to participants after they had participated in the training activities. Based on the results of the study, the results of a simple linear regression test were 4.831 with a significance value of $0.000 < 0.05$. So it can be concluded that H1 is accepted and H0 is rejected, which means that the e-learning variable has a significant influence on the learning interest of the East Java Province Strengthening Training Participants.

Keywords: E-Learning; Moodle; Interest in Learning.

1. Introduction

The rapid development of information technology in the current era of globalization is unavoidable. This development undoubtedly has a significant impact on the world, including education. This demand requires the educational sector to continually update and adapt to technological developments with the aim of improving the quality of education, particularly in adapting the use of technology in the educational sector.

One of the uses of online learning media is the existence of social networks, content management systems, and learning management systems. Given the current situation, every student is more inclined to utilize internet services to communicate with others. This habit is then seen as an opportunity for the world of education to help facilitate the achievement of learning goals beyond traditional schooling.

In the learning process within the educational environment, information technology plays a crucial role as a medium that is a factor in achieving learning objectives. Information and communication technology has now become an influential element in the educational world, used as a learning medium in the form of e-learning. The e-learning system is a new approach to the learning process, commonly known as e-learning.

E-learning became the basis and logical consequence of the influence of the development of information and communication technology. Through e-learning, learners no longer need to sit in a classroom to listen to the material presented by a live instructor. This undoubtedly helps prevent the spread of the COVID-19 virus during this pandemic.

Principal Strengthening Training is an education and training to strengthen the competencies of school principals in the areas of managerial, entrepreneurship, supervision, leadership, strengthening character education, and school development based on the 8 National Education Standards. The expected end result of this principal strengthening training is an increase in the competencies of school principals in accordance with the demands of the principal's workload as regulated in PP No. 19 Tahun 2017 tentang Guru dan Penilaian Kinerja, which has also been regulated in Permendikbud No. 6 Tahun 2018 tentang Penugasan Guru sebagai Kepala Sekolah. This training is carried out under the auspices of Pusat Pengembangan dan Pemberdayaan Pendidik dan Tenaga Kependidikan Pendidikan Kewarganegaraan dan Ilmu Pengetahuan Sosial (P4TK PKN dan IPS) Batu City.

In general, the use of e-learning is one way to learn online is to use Moodle. Moodle itself is software useful for learning, both for courses and schools, utilizing the internet. Moodle is widely used by many because, despite its copyright, it is open source and free. Its simple installation and use make it easy for various groups to learn through e-learning.

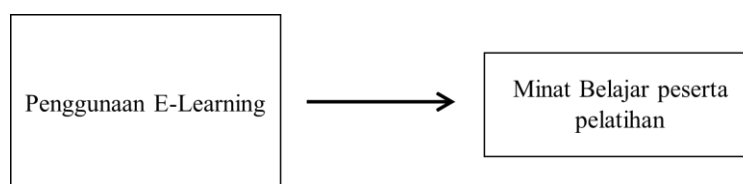
E-Learning is capable of assisting instructors in training activities because it is flexible and can be used at any time, even after the learning hours have ended. E-Learning can be used without the need for face-to-face meetings between instructors and training participants. This can be a solution when instructors are unable to attend due to important matters, allowing training participants to continue with the learning process. Or, as seen in the current pandemic situation where training is conducted online or through the e-Learning system. E-Learning is a way of learning that utilizes electronic media as supportive tools that help the learning process and activities in order to enhance the interest of training participants. Interest is a basic attitude characterized by a tendency of the soul and a desire towards something in achieving a goal, one of which is e-learning-based learning.

Based on the description above, the researcher conducted research with the title "The Influence of the Use of E-Learning" On the Learning Interests of Participants in the East Java Province School Principal Strengthening Training. This research was conducted because the School Principal Strengthening Training was the first program implemented online by PPPTK PKN and IPS. Therefore, the researcher was interested in examining the interests of school principals as training participants in implementing online training during the pandemic.

2. Method

This study aims to investigate the impact of e-learning on the learning interests of training participants. This influence can be observed by identifying the relationship between two variables, often referred to as a causal relationship or one that has a cause-and-effect nature. In this study, there is one independent variable and one dependent variable. The independent variable (X) is the variable that influences or causes changes in the dependent variable, and the dependent variable (Y) is the variable that is influenced by or is the result of the independent variable (Sugiyono: 2010). In this study, the use of *e-learning* is the independent variable, while the dependent variable is interest in learning.

Image of the Relationship Between Variables



This research was conducted on participants of the school principal strengthening training in East Java Province. The population of this study consists of all participants of the school principal strengthening training in East Java Province, totaling 30 classes. Each class consists of 20 participants, resulting in a total population of 600 participants from Jombang Regency, Nganjuk Regency, Kediri Regency, Kediri City, Pasuruan Regency, Pasuruan City, Blitar City, Batu City, Magetan Regency, Malang City, Trenggalek Regency, and Ngawi Regency. The sampling technique used in this research is random sampling through a drawing method. To narrow the population of 600 training participants, the researcher used Slovin's formula. This yielded a sample size of 85.7, which is rounded to 86 training participants. The 86 training participants are to be distributed across 30 classes, resulting in approximately 2.8 participants per class. Therefore, the sample consists of 2 to 3 training participants from each class.

This research consists of three stages: preparation, implementation, and final. In the preparation stage, activities include initial observation, submitting a permit application, collecting data, preparing research instruments (open-ended questionnaires addressed to training participants), and conducting instrument trials. Furthermore, in the implementation stage, activities include implementing the Principal Strengthening Training using Moodle. Respondents are then selected using a random sampling technique. In the final stage, the collected data is processed using statistical analysis to review hypotheses and draw conclusions. The collected questionnaire data is then analyzed using validity, reliability, normality, and linear regression tests, as well as experiments to determine whether the instrument meets the requirements for a measuring instrument. This allows the resulting data to yield valid results and to determine the influence and relationship between the two variables being studied.

3. Results and Discussion

3.1 Result

Validity Test

Obtaining the results of the validity test on instrument items using the Product-Moment correlation formula

Table 1. Instrument Validity Testing

Item	r_{count}	r_{table}	Decision
1	.488	0,44	Valid
2	.462	0,44	Valid
3	.476	0,44	Valid

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4	,590	0,44	Valid
5	,453	0,44	Valid
6	,493	0,44	Valid
7	,487	0,44	Valid
8	,710	0,44	Valid
9	,616	0,44	Valid
10	,457	0,44	Valid
11	,491	0,44	Valid
12	,622	0,44	Valid
13	,518	0,44	Valid
14	,620	0,44	Valid
15	,488	0,44	Valid
16	,632	0,44	Valid
17	,627	0,44	Valid
18	,489	0,44	Valid

The validity test uses Corrected Item-Total Correlation and is assisted by direct calculations from SPSS 17 software. As the data has been explained above, after being tested on respondents, the research instrument obtained the conclusion that 18 data items were valid and could be used as a measuring tool because it was declared valid when r_{count} is bigger than r_{table} , which is worth 0.44.

Reliability Test

Reliability test using Cronbach's Alpha formula. The results are presented in Table 2.

Table 2. Reliability Test

Cronbach's Alpha Value	Criteria	Information
0,865	0,60	Reliable

From the results of this calculation, it can be seen that the Cronbach's Alpha of the instrument is 0.865, which means that the instrument to be used has a value above 0.60, so it is declared reliable and can be used to conduct research.

Normality Test

The normality test is carried out using the Kolmogorov-Smirnov formula. The assumption is that the data is normally distributed if the values *are* more than 0.05.

Table 3. Normality Test

Sample	Kolmogorov Smirnov	
	Statistic	Sig
86 Principal Strengthening Training Participants	0,064	0,200

Based on the table above, it was found that the Kolmogorov value was 0.064 and the significant data was 0.200, which indicates that the data is greater than 0.05, so it can be concluded that this data has a normal distribution.

Simple Linear Regression Test

Simple linear regression analysis is used to measure the magnitude of the influence of one independent variable (X) on the dependent variable (Y). The following are the results of the simple linear regression test, as presented in Table 4.

Table 4. Simple Linear Regression Test

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig
	B	Std. Error	Beta		
1 (Constant)	13.380	3.892		3.438	.001
X	.431	.089	.466	4.831	.000

a. Dependent Variable: Y

Based on the data above, the calculated t-value is 4.831. The regression equation above shows the effect of e-Learning (X) on the learning interest of principal strengthening training participants (Y). The data shows that when the value of variable X does not increase, the value of variable Y is 13.380. The regression coefficient shows that for every additional value in variable X, it will increase the value by 0.431.

Then the obtained regression equation can be tested using analysis of variance for regression or t-test. From the results of the simple linear regression test, a t_{count} value of 4.831 was obtained, with a significance level of 0.000 and a critical t-table value of 1.99. This can then be concluded that with a significance value of $0.000 < 0.05$, there is an influence of e-Learning on learning interest.

Coefficient of Determination Test (R^2)

Test Coefficient of Determination (R^2) aims to predict and see how much influence variable X contributes together to variable Y. The results are as follows:

Table 5. Test Results Coefficient of Determination (R^2)

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.466 ^a	.217	.208	3.304

Based on the test Coefficient of Determination (R^2) above, the analysis results indicate that the value of r is 0.466, which means there is a moderate relationship between learning interest and e-Learning. Then, the coefficient of determination (KD), also known as R-square, is valued at 0.217. This value lies between 0 and 1. Thus, it can be explained from the KD value that the magnitude of the contribution of e-Learning usage to the learning interest of participants in the principal strengthening training in East Java Province is 21.7%, and the remaining 78.3% is influenced by variables outside of those being researched.

T-Test (Partial Test)

The t-test was used to determine whether the independent variable had a partial influence on the dependent variable. The results of the t-test on the effect of e-Learning use on the learning interest of principal strengthening training participants in East Java Province are shown in the following table:

Table 6. t-Test Results

Coefficients ^a					
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	13.380	3.892		3.438	.001
1 E-learning (X)	.431	.089	.466	4.831	.000

a. Dependent Variable: Interest in Learning (Y)

From the table 4.6 above, it can be seen that the t_{count} is 4.831 with a Sig value of 0.00. This indicates that the t_{count} is greater than the t_{table} value of 1.992 and the Sig value is smaller than 0.05. Therefore, it can be concluded that H_1 is accepted and H_0 is rejected. This means that the e-Learning variable has a significant influence on the learning interest of participants in the principal strengthening training in East Java Province.

3.2 Discussion

This research aims to find out whether there is an influence of the use of e-Learning on the learning interest of participants in the training to strengthen school heads in East Java Province. In this study, the influence of e-Learning is the independent variable while the learning interest is the dependent variable for the training participants, and both have an effect.

This study produces normally distributed data as evidenced by the results of the normality test. After conducting a hypothesis test using simple linear regression, it can be concluded that there is an influence of e-Learning on the learning interest of participants in the principal strengthening training in East Java Province.

After analyzing the research results, there are several factors that influence e-Learning on the learning interest of training participants. During the pandemic, technology such as e-learning is considered more effective as a learning method. In addition, many factors can affect the success of e-Learning, which can be seen from perceptions, attitudes, and intentions regarding the use of e-Learning. The appeal of e-learning lies in its appearance, ease of use, interaction capability, language used, program completeness, and the ability of both instructors and participants to maintain motivation and interest in learning.

This is in accordance with research conducted by Dinna Septyani Puspita (2015) which showed that there was an influence of the use of e-Learning (as an independent variable) on students' learning interest (which is the dependent variable) at State Vocational School 57 Jakarta in the Digital Simulation subject.

4. Conclusion

Based on the results of the research and discussions above, we can conclude that there is a significant influence of e-Learning on the learning interest of participants in the Training for Strengthening School Principals in East Java Province, based on the t-test results which show a value of 4.831 and a significance value of $0.000 < 0.05$, which means H1 is accepted.

Additionally, after conducting the experimental test, it was proven that the influence of e-Learning on the learning interest of participants in the Training for Strengthening School Principals in East Java Province has a moderate relationship, as the experimental results yield a value of 0.466.

References

- Anggraini, A. (2018). Keefektifan Pembelajaran Elektronik (E-Learning) Sebagai Pengganti Perkuliahan Konvensional Untuk Meningkatkan Kemampuan Analitis Mahasiswa. *Jurnal Sosial Humaniora*, 9(2), 95–105.
- Baharudin, R. (2010). Keefektifan media belajar berbasis teknologi informasi dan komunikasi. *Tadrîs*, 5(1), 112–127.
- Batubara, H. H. (2017). Pengembangan Situs E-Learning Dengan Moodle Versi 3.1 Sebagai Media Pembelajaran Pada Program Studi Pendidikan Guru Madrasah Ibtidaiyah. *Al-Bidayah : Jurnal Pendidikan Dasar Islam*, 9(1), Article 1. <https://doi.org/10.14421/al-bidayah.v9i1.116>
- Chandrawati, S. R. (2010). Pemamfaatan E-learning dalam Pembelajaran. *Jurnal Cakrawala Kependidikan*, 8(2). <https://jurnal.untan.ac.id/index.php/jckrw/article/view/183>
- Eddy, G. S., & Suryono, Y. (2019). Implementation of Online Learning Lessons in the Package C Program. *Journal of Nonformal Education*, 5(2), 117–124.
- Fauzi, A. (2011). *Implementasi Strategi Sains Teknologi Masyarakat (STM) Untuk Peningkatan Hasil Belajar IPA Materi Pesawat Sederhana Pada Siswa Kelas V SD Negeri Pajang III Surakarta Tahun Pelajaran 2010/2011* [PhD Thesis, Universitas Muhammadiyah Surakarta]. <https://eprints.ums.ac.id/id/eprint/13380>
- Gani, A. (2015). Pengaruh model pembelajaran dan persepsi tentang matematika terhadap minat dan hasil belajar matematika siswa smp negeri di kecamatan salomekko kabupaten bone. *Jurnal Daya Matematis*, 3(3), 337–343.
- Gata, G. (2016). PENGGUNAAN TECHNOLOGY ACCEPTANCE MODEL DALAM KAJIAN E-LEARNING DARI SUDUT PANDANG PENGGUNA (STUDI KASUS FAKULTAS TEKNOLOGI INFORMASI UNIVERSITAS BUDI LUHUR). *Jurnal Ilmiah FIFO*, 8(1), 33. <https://doi.org/10.22441/fifo.v8i1.1298>
- Karwati, E. (2014). Pengaruh Pembelajaran Elektronik (E-Learning) terhadap Mutu Belajar Mahasiswa. *Jurnal Penelitian Komunikasi*, 17(1), 41–54. <https://doi.org/10.20422/jpk.v17i1.5>

- Khatimi, H. (2006). Mengenal e-learning sebagai salah satu bentuk kegiatan pembelajaran. *INFO-TEKNIK*, 7(2), 72–81.
- Muhibbin Syah, Anang Solohin Wardan, Miftah Fauzi Rakhmat, & Muchlis. (1995). *Psikologi pendidikan: Dengan pendekatan baru* (Rev edition). Penerbit PT Remaja Rosdakarya.
- Mulyani, W. (2015). *Pengaruh pembelajaran berbasis e-learning terhadap hasil belajar siswa pada konsep impuls dan momentum*. <https://repository.uinjkt.ac.id/dspace/handle/123456789/26232>
- Murtiningrum, T. T., Ashadi, A. T., & Mulyani, S. (2013). PEMBELAJARAN KIMIA DENGAN PROBLEM SOLVING MENGGUNAKAN MEDIA E-LEARNING DAN KOMIK DITINJAU DARI KEMAMPUAN BERPIKIR ABSTRAK DAN KREATIVITAS SISWA. *INKUIRI: Jurnal Pendidikan IPA*, 2(03). <https://doi.org/10.20961/inkui.v2i03.9804>
- Nugraheni, A. R. E., & Dina, D. (2017). Pengaruh Penerapan Pembelajaran E-learning terhadap Kemandirian dan Minat Belajar Mahasiswa pada Mata Kuliah Wawasan dan Kajian Mipa. *Edusains UIN Syarif Hidayatullah*, 9(1), 178126.
- Pebrianty, W. (2010). FAKTOR-FAKTOR YANG MEMPENGARUHI PENERIMAAN PENERAPAN E-LEARNING SEBAGAI MEDIA PENDUKUNG PEMBELAJARAN di FAKULTAS EKONOMI UNTAN. *Jurnal Ekonomi Bisnis Dan Kewirausahaan (JEBIK)*, 1(2), Article 2. <https://doi.org/10.26418/jebik.v1i2.698>
- Priambodo, C. G. (2015). PENGARUH PENERAPAN E-LEARNING TERHADAP PENINGKATAN MOTIVASI DAN EFEKTIVITAS BELAJAR MENURUT KERAGAMAN SISWA DAN ORANG TUA: STUDI KASUS SMALB PANGUDI LUHUR JAKARTA. *Faktor Exacta*, 6(1), Article 1. <https://doi.org/10.30998/faktorexacta.v6i1.213>
- Puspita, D. S., & Prasetya, E. A. (2015). Pengaruh Penggunaan E-Learning Terhadap Minat Belajar Siswa Mata Pelajaran Simulasi Digital (Tik) Pada Smk N 57 Jakarta. *Jakarta: STIMIK Nusa Mandiri*.
- Silahuddin, S. (2015). Penerapan E-Learning dalam Inovasi Pendidikan. *CIRCUIT: Jurnal Ilmiah Pendidikan Teknik Elektro*, 1(1). <https://doi.org/10.22373/crc.v1i1.310>
- Slameto. (2013). *Belajar dan faktor—Faktor yang mempengaruhinya*. Rineka Cipta.
- Sugiyono. (2008). *Metode penelitian pendidikan: (Pendekatan kuantitatif, kualitatif dan R & D)* (Cet. 6). Alfabeta.
- Suhartini, D. (2001). Minat Siswa terhadap Topik-topik Mata Pelajaran Sejarah dan Beberapa Faktor yang Melatarbelakanginya. *Universitas Pendidikan Indonesia*.
- Sujarweni, V. W. (2014). *Metodologi Penelitian: Lengkap, Praktis & Mudah Dipahami*. Pustaka Baru Press. <https://books.google.co.id/books?id=cHfvzWEACAAJ>
- Yusuf, A. R. (2011). *Pengembangan alat evaluasi pembelajaran berbasis e-learning pada mata pelajaran TIK di SMAN 4 Malang / Arief Rahman Yusuf* [Diploma, Universitas Negeri Malang]. <https://repository.um.ac.id/45655/>