



University of Jember
Faculty of Teacher Training and Education



UNIVERSITAS
JEMBER

PROCEEDINGS

3rd ICEGE 2020

The Third International Conference on Environmental Geography
and Geography Education

September 12th - 13th, 2020

at Faculty of Teacher Training and Education, University of Jember

PAPER • OPEN ACCESS

Preface

To cite this article: 2021 *IOP Conf. Ser.: Earth Environ. Sci.* **747** 011001

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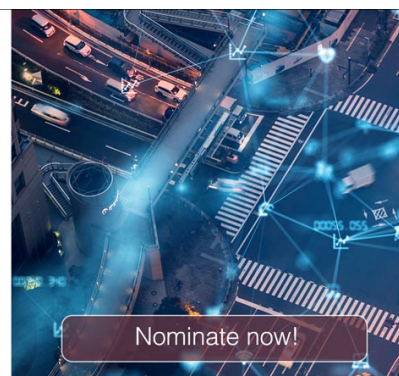
The Electrochemical Society

Advancing solid state & electrochemical science & technology

The ECS is seeking candidates to serve as the **Founding Editor-in-Chief (EIC) of ECS Sensors Plus**, a journal in the process of being launched in 2021

The goal of ECS Sensors Plus, as a one-stop shop journal for sensors, is to advance the fundamental science and understanding of sensors and detection technologies for efficient monitoring and control of industrial processes and the environment, and improving quality of life and human health.

Nomination submission begins: May 18, 2021



The Third International Conference on Environmental Geography and Geography Education (ICEGE) 2020

Sumardi

Editor in Chief of International Conference on Environmental Geography and Geography Education 2020

E-mail: sumardi.fkip@unej.ac.id

We would like to express our gratitude to all participants joining “The International Conference on Environmental Geography and Geography Education” (ICEGE). The 3rd International conference held by the Department of Social Science Education held by FKIP-University of Jember on 12-13 September 2020. The participants of this ICEGE 2020 are research students, academicians and researchers, scholars, scientist, teachers and practitioners from many countries.

Due to Covid-19, this conference was held in dual-mode, namely online and face to face. For those invited speakers from abroad who have travel restrictions presented their research topics through zoom cloud meeting. Likewise, participants who stay outside Jember city joined the conference virtually. Meanwhile, participants from within Jember city joined conference in person by complying the Covid-19 protocol.

Two hundred forty-eight participants attended this conference. The number of submitted papers were 219 and papers sent to the reviewers were 198. Two reviewers reviewed one paper. Each reviewer reviewed maximum 8 papers. Based on reviewer recommendations, finally the number of accepted papers is 130. Thus, the acceptance rate is 59,4 %.

In the plenary season, each invited speaker presented their presentations for 1 hour and 15 minutes for Q/A session. In the parallel session, each participant made the presentation for maximum 15 minutes and 5 minutes for Q/A session. The technology used in the parallel session is zoom cloud meeting with 13 breakout rooms.

This conference becomes a dissemination forum for scientists working on theoretical and empirical research of environmental geography, transportation geography, geography education, social science and its application. This conference's mission is to become an annual international forum in the future, where civil society organization and representative research students, academics and researchers, scholars, scientists, teachers, and practitioners from all over the world could meet and exchange an idea to share and discuss about research. The aim of the second conference is to present and discuss the latest research that contributes to the new ontological, epistemological and axiological knowledge and



to a better understanding in the area as follows:(1) Environmental Geography; (2) Geography Information System and Remote Sensing; (3) Geomorphology; (4) Natural Disaster; (5) Economics; (6) History; (7) Education; (8) Humanities; (9) Social Sciences and (10) Global Science and Studies.

On behalf of the organizing committee, finally we gratefully acknowledge the support from the FKIP-University of Jember of this conference. We would also like to extend our thanks to all lovely participants who have been joining this unforgettable and valuable event.

Assoc. Prof. Dr. Sumardi, M.Hum



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The committees of the Third International Conference on Environmental Geography and Geography Education would like to express gratitude to all Committees for the volunteering support and contribution in the editing and reviewing process.

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Peer review statement

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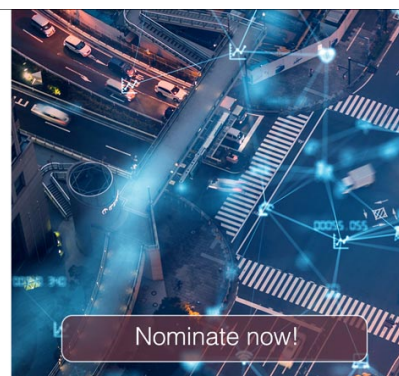
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Nomination submission begins: May 18, 2021



Peer review statement

All papers published in this volume of IOP Conference Series: Earth and Environmental Science have been peer reviewed through processes administered by the Editors. Reviews were conducted by expert referees to the professional and scientific standards expected of a proceedings journal published by IOP Publishing.

- **Type of peer review:** Double-blind review. The authors and the reviewers do not know each other. The managing editor send the papers to the reviewers by hiding the authors' name and their affiliation.
- **Describe criteria used by Reviewers when accepting/declining papers. Was there the opportunity to resubmit articles after revisions?** There were 13 aspects of assessment for accepting/declining papers, i.e. Clarity of abstract, Significance of research, Sufficiency state of the art, Contribution to the field (novelty), Research objective, Appropriateness of the research method, Relevance and clarity of drawings, graphs and tables, Experimental/evidential support, Quality of data or findings, Discussion and conclusions, Direction for future research and recommendations, Clarity of English, Writing style (according to EES format). There are no opportunities to resubmit papers after rejection. For the revised papers regarding to reviewer comments, they should resubmit their papers.
- **Conference submission management system:**
<https://easychair.org/conferences/?conf=icege2020>
- **Number of submissions received:** 219
- **Number of submissions sent for review:** 198
- **Number of submissions accepted:** 130
- **Acceptance Rate (Number of Submissions Accepted / Number of Submissions Received X 100):** 59,4 %
- **Average number of reviewers per paper:** 2
- **Total number of reviewers involved:** 50
- **Any additional info on review process (ie. plagiarism check system):** We used TURNITIN software to check the plagiarism issue during the review process.



- **Contact person for queries:**
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Universitas Jember, Indonesia
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2021

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3rd International Conference on Environmental Geography and Geography Education, 12 September 2020, East Java, Indonesia

Accepted papers received: 12 April 2021

Published online: 12 May 2021

Open all abstracts

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Coastal Community Resilience Planning Toward Disaster: A Case Study on Coastal Area in Malang Regency, East Java, Indonesia

L Y Irawan, Sumarmi, S Bachri, M M Rosbella Devy, R Faizal and W E Prasetyo

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Landslides susceptibility mapping based on geospatial data and geomorphic attributes (a case study: Pacet, Mojokerto, East Java)



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Strategic Value of Marble Mine Management for Community Economic Improvement and Challenges Keeping Sustainable Environmental Support in Tulungagung Regency

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Forming spatial thinking skills of social studies students in phenomenon analysis geosphere through the Geographic Information System (GIS)

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Development of Supplementary Contextual Teaching Materials Based on Ecotourism and Natural Resource Management

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


















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Effectiveness android-based learning media on basic competence of service company financial statements class X AKL at SMK Negeri Darul Ulum Muncar Banyuwangi

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Effectiveness android-based learning media on basic competence of service company financial statements class X AKL at SMK Negeri Darul Ulum Muncar Banyuwangi

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Abstract. This research aimed to use Android-based learning media on the basic competency of service company financial statements class X AKL at SMK Negeri Darul Ulum Muncar Banyuwangi. This research applied quasi-experiment research. The participants of this research 34 students of class X AKL 1 and 35 students of class X AKL 2. Class X AKL 1 as an experimental class and X AKL 2 as a control. The data analysis method used in this research was the level of effectiveness using t-test. The results on the large-scale test's effectiveness level were indicated by the significance level of $0.000 < 0.050$, which showed a significant difference from the experimental class to the control class. The effectiveness stated that the Android-based learning media was effective in the basic competency of service company financial statements. The suggestion for further development is that Android-based learning media is used in the basic competency of service company financial statements and can be developed in other basic competencies with the same characteristic.

1. Introduction

The development of information and communications technology (ICT) now has been implemented in the education field. It is indicated by the more straightforward learning process by utilizing ICT as the learning media. Learning media that use ICT can make learning exciting and positively impact students' learning outcomes [1]. Implementing ICT in learning media usually requires a computer or laptop. Along with the development of ICT, computers and laptops are no longer the only resources; the smartphone now is another option.

Smartphones are provided in various operating systems such as Android, iOS, Windows Phone, and others [2] However, teachers and students' most common operating system in Indonesia is Android [3]. Android is also the most practical and affordable operating system [4]. Therefore, Android-based smartphones as learning promote students' comprehension of the material more easily [5].

Android-based learning media can be applied in basic accounting subjects for basic competency of service company financial statements. The basic competency of the financial statements of service company contains quite complex materials. The financial statement is a report that shows the company's financial position in a certain period [6]. The materials of the basic competency of financial statements consist of types of financial statements, which contain income statements, changes in working capital, and balance sheets [7].

The use of android-based learning media must have effectiveness because it can help the learning process and delivery of lesson content following the curriculum's demands [8]. The effectiveness of learning media can be seen from the increase in students' understanding of the material during the learning process [9].



Android-based learning media should be useful, as well. Effective learning media are expected to support the students in achieving learning goals [10]. In this context, the use of PowerPoint presentation as the learning media in class is considered still lacking in the implementation. This can be perceived from the teachers' documents regarding the results of students' formative test results on the basic competency of a service company's financial statements in class X AKL, which are still considered not optimal, indicated by the average class score that is not meeting the specified standard.

The explanation of the problem above shows that the teacher's learning media is still not adequate. Therefore, it is necessary to have a trial using the teacher's media, namely, PowerPoint presentation with Android-based learning media to see the effectiveness of instructional media.

Android-based learning media has an attractive appearance so that it makes students focus during the learning process [11]. The appearance of learning media based on Android KD-based financial reports is attractive because the media displays the following menus: (1) instructions for use; (2) basic competence; (3) material; (4) learning video; (5) practice questions; (6) submission of tasks; (7) quiz. The menu display makes students understand the material during the learning process to help students achieve learning objectives which can be seen from improving learning outcomes [12].

According to the background of the problem explained above, the researchers have accomplished this research entitled "Effectiveness Android-Based Learning Media on Basic Competence of Service Company Financial Statements Class X AKL at SMK Negeri Darul Ulum Muncar Banyuwangi."

2. Methods

This research is quasi-experimental [13]. In the quasi-experiment, there was an experimental class and a control class. The experimental class is a class that uses Android-based learning media, while the control class is a class that does not use Android-based learning media. This quasi-experiment requires that both classes have homogeneity. The research subjects were students of class X AKL SMK Negeri Darul Ulum Muncar Banyuwangi. Class X AKL 1 with 34 students became the experimental class while class X AKL 2 with 35 students became the control class.

The instrument used in this research was 20 multiple-choice questions. The data collection technique used is the test technique. Technique tests are carried out to see student learning outcomes. Then the student learning outcomes were analyzed by independent sample t-test.

3. Results and Discussion

The level of effectiveness of learning media based on Android is seen from comparing students' learning outcomes in class X AKL 1 class with class X AKL 2. The following is the distribution of student learning outcomes for class X AKL 1 and class X AKL 2.

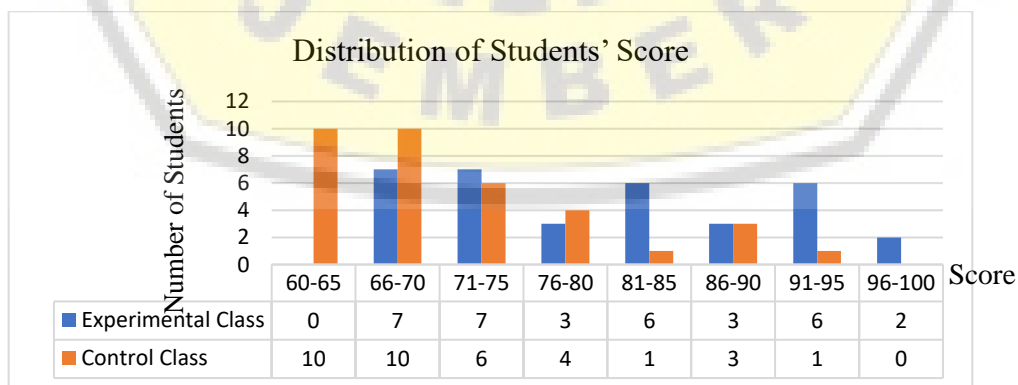


Figure 1. Distribution of Students' Score

The figure above indicated the differences in students' learning outcome scores from the experimental and control classes. The experimental class showed 66-70 as the minimum score range, the highest degree of score of 96-100, and the average score of 82.5. Meanwhile, the control class had

60-65 as the minimum score range, 91-95 as the highest score range, and an average score of 73. The score gap between experimental and control class indicated a significant difference. Based on the distribution of students' scores, the class with android-based learning media achieves a higher score than the class that does not use android-based learning media. It showed that Android-based learning media was effectively applied in basic service company financial statements' basic competency.

Statistical tests were carried out with the help of SPSS. First of all, researcher carried out the normality test and homogeneity test between class X AKL 1 and class X AKL 2. The results are as follows:

The data tested is the value of student learning outcomes of the previous basic competence of class X AKL 1 and X AKL 2. The results of the normality test can be found out in the table below:

Table 1. Test of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Experimental Class	.141	34	.085	.943	34	.077
Control Class	.154	35	.040	.969	35	.437

a. Lilliefors Significance Correction

Based on the Shapiro-Wilk above, the Sig. > 0.05 can mean that the value data distribution for the experimental and control class is expected. After carrying out the normality test, the data was then tested for the level of homogeneity.

The homogeneity test was carried out to determine whether there was a variance difference between the experimental and control class. The homogeneity test shows the following results:

Table 2. Test of Homogeneity of Variances

Students Learning Outcomes			
Levene Statistic	df1	df2	Sig.
1.673	1	67	.200

Based on the homogeneity test above, the Sig. 0.2 > 0.05, so it can be means that the variance of the experimental and the control class is homogeneous. Thus, class X AKL 1 and class X AKL 2 can be compared to determine Android-based learning media's effectiveness.

The test of the effectiveness of Android-based learning media uses the t-test, namely the independent sample t-test. The t-test is used to determine whether there are differences in the two classes with different treatments. These two classes, namely the experimental class that uses android-based learning media and the control class that does not use android-based learning media. The results of the independent sample t-test to determine the level of effectiveness can be found out in the table below:

Table 3. Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
									Lower	Upper
Students Learning Outcomes	Equal variances assumed	1.942	.168	4.135	67	.000	9.35714	2.26285	4.84047	13.87382
	Equal variances not assumed			4.128	65.588	.000	9.35714	2.26677	4.83086	13.88343

The independent sample t-test of experimental and control classes based on their learning outcome score difference was Sig. (2-tailed) = 0,00 < 0,05. According to the test result, it can be concluded that there was a significant difference between the experimental and control classes in the matter of their obtained scores.

Android-based learning media's effectiveness was shown by the achievement of learning objectives [14]. Meanwhile, it was obtained from the result of the independent sample t-test. Based on the work, there was a significant difference between students who used the Android-based learning media compared to those who did not, figured in their learning outcomes. Following the research results conducted by [15], Android-based learning media can effectively improve student understanding so that learning objectives can be achieved.

Students who used Android-based learning media obtained a higher average of learning outcomes than those who did not use it. It shows that Android-based learning media is sufficient to be applied in a service company's basic competency of financial statements. Warsita [10] stated that Android-based learning media effectively helps students understand the material more straightforward to achieve the learning objective. Android-based learning can improve the learning outcomes because through android-based learning can access lessons and assignments anywhere and anytime [16].

Android-based learning media's advantages make students more interested so that it is easy to understand the material. The benefits of Android-based learning media include: (1) Android-based learning media can be used by students anywhere and anytime; (2) students can learn independently through the display menu contained in Android-based learning media; (3) the appearance of Android-based learning media is attractive so that it can increase student motivation; (4) makes it easier for teachers to deliver material to students [17]

The explanation above proves that Android-based learning media on the basic competence of financial statements service company class X AKL at SMK Negeri Darul Ulum Muncar Banyuwangi is an effective learning media.

4. Conclusions

Based on the result and discussion of this research, it can be concluded that the average student learning outcomes of class X AKL 1 are higher than class X AKL 2. Class X AKL 1 is the experimental class using Android-based learning media, while class X AKL 2 is the control class does not use Android-based learning media. The independent sample t-test stated a significant difference between class X AKL 1 and X AKL 2. So, Android-based learning media is an effective media to use in the basic competence of financial statement service company X AKL at SMK Negeri Darul Ulum Muncar Banyuwangi.

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References

- [1] Chuang, C.P. and W.F. Chen. 2011. *Effect of Varied Types of Collaborative Learning Strategies on Young Children: An Experimental Study. International Journal of Instructional Media.* Vol. 38, Issue 4.
- [2] Lee, W. M., 2011. *Beginning Android Application Development.* Indiana: Wiley Publishing.
- [3] Ismanto, E., M. Novalia, and P. B. Herlandy. 2017. Pemanfaatan *Smartphone Android* Sebagai Media Pembelajaran Bagi Guru SMA Negeri 2 Kota Pekanbaru. *Jurnal Untukmu Negeri.* Vol. 1, No. 1.
- [4] Izzati, F. D. and Sumarsih. 2017. Pengembangan Media Pembelajaran Aplikasi Peta Akuntansi (Taksi) Berbasis *Android* pada Materi Siklus Akuntansi Perusahaan Jasa. *Jurnal Pendidikan Akuntansi Indonesia.* Vol. 15, No. 2.
- [5] Sutopo, H. A. 2012. *Teknologi Informasi dan Komunikasi dalam Pendidikan.* Yogyakarta: BPFE.
- [6] Warren, C. S., J. M. Reeve, J. E. Duchac, E. T. Wahyuni and A. A. Jusuf. 2014. *Pengantar Akuntansi Adaptasi Indonesia.* Jakarta: Salemba Empat.
- [7] Rudianto. 2012. *Pengantar Akuntansi (Konsep dan Teknik Penyusunan Laporan Keuangan).* Jakarta: Erlangga.
- [8] Haryoko, S. 2009. Efektivitas Pemanfaatan Media Audio-Visual Sebagai Alternatif Optimalisasi Model Pembelajaran. *Jurnal Edukasi.* Vol. 5, No. 1.
- [9] Khanifatul. 2014. *Pembelajaran Inovatif.* Yogyakarta: Ar-Ruzz Media.
- [10] Warsita, B. 2008. *Teknologi Pembelajaran (Landasan & Aplikasinya).* Jakarta: Rineka Cipta.
- [11] Sanaky, H. A. H. 2013. *Media Pembelajaran Interaktif-Inovatif.* Yogyakarta: Kaukaba.
- [12] Yaumi, M. 2013. *Prinsip-prinsip Desain Pembelajaran.* Jakarta: Kencana.
- [13] Sugiyono. 2018. *Metode Penelitian Pendidikan Pendekatan Kuantitatif, Kualitatif, dan R&D.* Bandung: Alfabeta.
- [14] Arsyar, R. 2011. *Kreatif Mengembangkan Media Pembelajaran.* Jakarta: Gaung Persada.
- [15] Arsyad, M. N. dand D. E. G. Lestari. Efektivitas Penggunaan Media *Mobile Learning* berbasis *Android* Terhadap Hasil Belajar Mahasiswa IKIP Budi Utomo Malang. *Jurnal Agastya.* Vol. 10, No. 1.
- [16] Elfeky, A.I.M. and T.S. Masadeh. The Effect of Mobile Learning on Students' Achievement and Conversational Skills. *International Journal of Higher Education.* Vol 5 (3)
- [17] Asabere, N. Y., 2013. Benefit and Challenges of Mobile Learning Implementation: Story of Developing Nations. *International Journal of Computer Applications.* 1 (73): 23.