opción

Revista de Antropología, Ciencias de la Comunicación y de la Información, Filosofía, Lingüística y Semiótica, Problemas del Desarrollo, la Ciencia y la Tecnología

Android-Based Fast-Track Scoreboard Application Development in Assessing Academic Writing

[1]Try Hariadi, [2]Sarwiji Suwandi, [3] St. Y. Slamet, [4] Sumarwati

[1]Doctorate student in University of Sebelas Maret Indonesia, try_hariadi@student.uns.ac.id
[2,3] Prof., Universitas Sebelas Maret Surakarta, Indonesia, sarwijiswan@staff.uns.ac.id; slametsty@yahoo.co.id
[4]Dr., Universitas Sebelas Maret Surakarta, Indonesia, watik_uns@ymail.com

Abstract
This research aims to describe the lecturers' and undergraduates' state, need, development, and effectiveness. R&D covers several stages starting from exploration, development, and product testing. Research finding, the academic writing quality is far from what it is supposed to be, still conventional, and needs improvement. The draft is validated, identified, and implemented. The data in both control class (0.7704<0.7956) and experimental class (0.7910<0.7956) are in normal distribution as the $L_o<L_t(\alpha=0.05)$. Moreover, the data are homogenous since $\chi^2_o(2.20)$ is lower than $\chi^2_t(5.99)$ with $\alpha=0.05$. It is found that to$(12.37)>t_t(1.67)$ with $\alpha=0.05$. Thus, android-based fast-track scoreboard application is more effective than conventional application.

Keywords: android application, fast-track scoreboard, assessment, academic writing.

INTRODUCTION

Language proficiency especially for academic writing can be enhanced by communicating the research findings through writing activity. Academic writing competence becomes the standard for the undergraduates' success. The development of this competence is aimed to enhance the undergraduates in organizing ideas or concepts to be communicated to the others, so knowledge transference can be done effectively.

Assessing academic writing by using android-based fast-track scoreboard application is in line with standard assessment for higher education.As stated by Parrish (2016: 314), assessment has something to do with assessment focus, instructional design, feedback, curriculum content, assessment strategy, technology, sociological consideration, and undergraduates' involvement. The assessment involves the undergraduates in each or some parts of evaluation process (Kearney, Lesley, and Skerritt, 2013: 114). From the beginning, fast-track is able to increase the graduation rate and decrease the gap to focus on individual assessment so that it fits the purpose of assessment (Turrent, 2009: 2).

The writer finds that the lecturer still implements conventional learning as one of some assessment alternatives. This is reflected from the learning process in higher educations, especially in learning academic writing. The systematic grades given are used to reinforce the undergraduates' concepts and to assess that learned concepts. It is found that the undergraduates do not do the tasks and cooperate maximally. The continuous implementation of conventional assessment without another various assessment makes the undergraduates passive so that the learning atmosphere becomes competitive and not interactive.

The assessment shows that the result of undergraduates' academic writings are unsatisfying. It is caused by conventional assessment that tends to be formal and vague.The activities in assessing undergraduates' academic writing skill is likely to be partial and passive. The academic writing skill of first semester undergraduates in the academic year of 2016/2017 is low. Based on the document in 2017, there are only 35% up to 43% of undergraduates who get 70 or B. This lack is the effect of the poor assessment guidelines. Furthermore, undergraduates need to learn how to adapt with the learning situation in higher education which is different from the previous learning situation.

Due to the gap found, the undergraduates' are expected to have competences involving academic writing assessing. Based on the concept that language is a sub-system of behavior; developing assessment pattern is

needed in higher education so that habitual and factual learning experiences that encompass motivation can be achieved. The development of this pattern is aimed to improve linguistic competence. Hence, the undergraduates are able to obtain, convey, and communicate information well without facing difficulty.

The solution of the above problem is implementing innovative assessment through research and development. In this research and development, Android based scoreboard fast-track is implemented. The novelty and responsibility given in classroom action research result in significant benefit for the lecturer as well as the undergraduates.

Themed research result related to fast-track based implementation, especially fast track-based, have been conducted in economics, social, management, engineering, and health field. Being compared to the previous research, a research on the implementation of android-based fast-track scoreboard application in educational field has not been conducted yet by another researcher. The novelty of this research is that it is done to involve the undergraduates in assessment through various assessment in order that they get faster assessment by utilizing android-based fast-track scoreboard application designed especially that is something new. Android-based application is a new thing.In the past few decades, mobile devices ownership rate is higher. This is affected by mobile device price that undergraduates can afford.

Based on the background, the researcher is eager to know the condition and the needs of assessment academic writing, Besides, it is also important to develop assessment and to find out the effectiveness of android based scoreboard fast track application for academic writting in higher education.

THEORETICAL STUDY
Android-based Aplication
Terminologically, application is a ready-to-use program made for users to accomplish the intended purpose. According to Asropudin(2013:6), application is a software made by a computer company to play certain roles such as Ms. World, Ms Excel and so on. Furthermore, Maiyana (2018:54) states that android is an open source operating system that allows the developer to develop an application that eases android-based smartphone users to enjoy various applications. The software used to develop android-based application are android studio, integrated development enviroment (IDE), android software development kit (Android SDK), java development kit

(JDK), android virtual device (AVD), and java (Maiyana, 2018: 58).
As the number of undergraduates who use mobile device is higher, the possibility to implement mobile technology in education field is better. In the field of education, mobile device is known as mobile learning (Gorgiev et al., 2014). O'Malley (2003:6) defines mobile learning as a learning where the undergraduates do not stay in one place or a learning that utilizes technology which is mobile device.

Scoreboard Fast-track

Based on the regulation of Ministry of Research, Technology, and Higher Education in Indonesia No.44 Year 2015 about learning assessment standard, 20 (1); it is stated that assessment covers integrated educative, authentic, objective, accountable, and transparent principle. In this research, android-based fast-track scoreboard application for academic writting which is in line with the above regulation. According to Turrent (2009), United States Education Department (2014), and McConney at al. (2012) state that scoreboard fast-track is a comprehensive intervention program in the form of planned and developed complex strategy used to minimize educational problems and learning challenges.

As stated by Hariadi (2016), fast track is a feature used in assessment process. The winner of fast track, either individually or in group, gets more point or score. The scoring rubric starts from very good, good, good enough, and not good enough. The requirement is forthose who complete challenges in fast track assessment and undergraduate are able to get the point in every meeting. Tjaturono & Mochtar (2009) assert that fast-track scoreboard method is a scheduled method in which the time to complete a project is briefer than the normal time. This eases lecture assessment and undergraduates to know the learning outcome faster from the beginning to the end of the courses.

Academic Writing Assessment

Assessment is used to holistically measure the achievement of a program, the planning as well as the implementation of a program, the procurement, the skill improvement, the manager, and the reformation. Based on Permenristekdikti (Ministry of Research Technology and Higher Education regulation) No. 44/2015 article 19 verse 1, assessment standard is a minimum criteria on process assessment and learning outcome used to succeed graduate achievement. Additionally, process assessment and learning outcome that cover principles, techniques and instruments, mechanisms

and procedures, implementation, reporting, and graduation are stated in
Permenristekdikti No. 44/2015 article 19 verse 2.

Academic writing involves expressing arguments and reasons through rea-
soning, questioning about facts, supporting ideas, and empirical evidence;
as well as rebuttal (Hillocks, 2011:vi). Academic writing is characterized
as specific, supported, and focusedthrough paragraphs cohesion and co-
herence (Curriculum and Assessment Division, 2010:24). The structure of
academic writing involves context, thesis, navigation, evidence, counter
argument, and conclusion. Additionally, academic wiriting is character-
ized as linear, informative, complex, formal, precise, objective, explicit,
accurate, qualified, and accountable (University of Technology Sydney,
2013: 4). Academic writing also has several steps namely prewritting,
drafting, revising, editing, and publishing. The quality of academic writing
can be seen through several factors like the format, topic, data and sources,
discussion, conclusion, accurate data transference.

METHOD

The aim of this research is to design a product or a new assessment that is
systematically field tested, evaluated, and improved so that the expected
criteria are fulfilled (effectiveness, quality, or certain standard). Principal-
ly, according to Sukmadinata (2012: 189),research and development (R &
D) procedure covers three stages. The first stage is preliminary or explora-
tion stage to test the theory and investigate the product. The second stage
is developing model or designing new model. The third stage is testing and
validating the product.

Research procedure: preliminary/exploration stage

Method used in this stage is constant comparative method. The purposes
of this stage are (1) investigating the existing assessment used in academic
writing class in terms of its condition and quality; (2) investigating the
lecturers' and students' needs towards the android-based fast-track score-
board application for academic writing; and (3) designing the product
specificationof the android-based fast-track scoreboard application in ac-
ademic writing.

The data collection techniques used in this research referred to the concept
composed by Cohen, et. al. (2000: 271) which involved the following stag-
es: (1) conducting in-depth standardized open-ended interviewswith all of
the respondents (policy makers, lecturers, and students) about anything
related to the android-based fast-track scoreboard application especially

in terms of academic writing, (2) conducting structured or controlled observation.This observation is supported with several forms, checklists, or other kinds of forms that have been prepared previously. The researcher also did an observation towards academic writing process using the existing assessment and also asked for the participants to fill questionnaires that have been prepared previously, and (3) doing document analysis on the related documents.

The data validation was obtained by using: (1) data triangualtion or source triangulation (Sutopo, 2002: 79). This technique directed the researcher to collect the data from several available sources; (2) member checkig through: (a) respondents' assessment, (b) error and mistake correction, and (c) providing additional information from the respondents voluntarily, (d) involving the respondents in the research as the initial step in analyzing the data, and (e) checking the adequacy of the collected data (Moleong, 2010: 336-33); (3) peer review by exposing the temporary result in the for of a discussion.

In this research, document analysis was done to identify the feasibility of the existing academic writing assessment used in non linguistic study within universities. The data nalysis techniques used in this research involve: (1) data analysis on the conventional assessment, (2) data revision inolving the network among linguistic features or structured summaries, and material manuscript; and (3) data erification done by using peer-debriefingtechnique to get accurate findings (McDonough & McDonough's model in Cohen, et. al 2000: 108).

The assessment of the product of this research was done by using peer-debriefing techniquemainly from in-dept interview with the collaborators and the experts. Based on the experts' assessment through a focus grup discussion (FGD), it was expected to obtain the strenght and weakness of a assessment.

Research procedure: development stage

The purpose of this stage is to develop the product, android-based fast-track scoreboard application in academic writing. The product was developed based on the product specificationthat had been designed in the exploration stage. The stages of the development are as follows: (1) drafting the android-based fast-track scoreboard application in academic writing, (2) validating the draft that had been desingned by the experts, (3) testing the draft of android-based fast-track scoreboard application in academic writing process, (d) monitoring and evaluating the testing, and (e) revising

the draft based on the monitoring and evaluating result. This process is repeated until the product passes the criteria.

The population and the samples of this research involve the undergraduate students of Geographics Education Department at IKIP PGRI Pontianak, Chemistry Education Department at Tanjungpura University, and Islamic Education Department at IAIN Pontianak. The samples are the fresh undergraduate students. Their ages are for about 18. The lecturers chosen are 3; they are lecturers who work fully in the corresponding universities and those who have working experience 5-20 years. Class A is used as the experimental class, while class B is used as the control class for every univeristy. The control class involves 124 undergraduates, while the experimental class involves 127 undergraduates; in total, there are 251 undergraduates involved. The sampling technique used was stratified random sampling based on the quality of the classes in every university (high, mid, and low).

The product was monitored and evaluated through participant observation, in-depth interview, document analysis, and focus group discussion. After being monitored and evaluated, the product was revised so that it becomes better. Once the prototype meets the expected criteria determined through field testing, main testing, and product revision; the prototype becomes android-based fast-track scoreboard application used to teach undergraduates academic writing.

Research procedure: model testing stage

The purpose of testing the product was to examine the effectiveness of the android-based fast-track scoreboard application in academic writing. The effectiveness is reflected in the scores of the group of students who were given the academic course using the android-based fast-track scoreboard application that was better than that of those of the students who were given academic writing course using another assessment.

The method used was the experimental method. Experimental research can be interpreted as an objective, systematic, and controlled study to predict or control phenomena. In this case, the researcher randomly selected two groups. The first group is called the experimental group, and the second group is the control group. The experimental group was given the academic writing course using android-based fast-track scoreboard application, while the control group was taught using the other assessment. After 12 treatments, the achievements of the two groups were compared. The android-based fast-track scoreboard application in academic writ-

ing is considered effective if the experimental group's academic writing achievement is better than that of the control group. Before the learning was carried out, the pre-test was conducted, and the post-test was held at the end of the learning of the two groups, the control group (group I) and the experimental group (group II). The post-test results gave an overview of the differences in the pre-test and post-test results or scores of the two groups (Chistensen, 1978: 177).

The types of data collected were quantitative and qualitative data. The quantitative data were in the form of achievements assessment outcomes while the qualitative data were in the form of learning. The quantitative data in the form of scores were collected using testing techniques while the qualitative data were obtained using observation technique, in-depth interviews, and document analysis. The validity of the quantitative data are measured by using content and construct validity; while the reliability is measured by using rating scale statistics. Meanwhile, the data validity was checked using (1) member checking, (2) data source triangulation, and (3) peer review.

The data were then analysed using the Analysis Requirements test with normality test, balance test, and homogeneity test. The normality test was used to test whether the data were normal or not. For this test, the Lilliefors (Lo) test technique was used at a significance level of a = 0.05. The criterion used was if Lo < Lt, then the data had a normal distribution. The balance test with the test scores as the dependent variable was measured with a numerical scale using the t-test (Independent Samples t-test) to compare the two groups based on the type of the test and the learning model. One way Anova test with different cells is to compare the two groups (control class and experimental class). Homogeneity test is used to test the variance similarity between two or more groups compared. To test the homogeneity of population variants, the Bartlett test was used at a significance level of a = 0.05. The testing criterion used was when the value of $\chi 2$ is smaller than $\chi 2$ in the table at a significance level of a = 0.05, the data is homogeneous. After testing the requirements for THE data analysis, the next was the hypothesis testing. The research output of the testing phase of this product was the effective and feasible android-based fast-track scoreboard application in academic writing.

RESULTS AND DISCUSSION
The Research Findings of the Exploration Stage

Table 1. The Condition of The Assessing Academic Writting So Far

No	The Condition of The Assessing Academic Writing	Research Purposes	
		The Need of The Bahasa Learning Model	
		For Lecturers	For Students
1	has not been maximized	to apply the academic writing learning model in teaching their students in the university	It is necessary for the prospective students to learn the academic writing learning model as the provision
2	the existence and feasibility of the model is quite good	Expected to equip students with scientific writing	basis for them to write scientific papers
3	the learning activity has decreased	Implement scientific writing and speaking skills	teach the language skills to their future students
4	has lack of innovation	The use of the assessment considered not optimal	All consider that the implementation of assessment
5	has not been able to increase	in facilitating the student in academic writing	Difficult subjects need
6	not effective	The lecturers did not use appropriate assessment. The assessment used was based on the lecturer's authority.	an up-to-date assessment to reduce boredom
7	the need for renewal	The fast track scoreboard is an integrated assessment has not yet existed and has never been implemented	the effective group and personal, and the assessment transparency

Tabel 2. The Need For Assessing Academic Writing

No	University	The Perceptions of The Android Application/ Assessment/ Fast-track Scoreboard.
1	Univesitas Tanjungpura	whetting the language skills, improving the knowledge of writing papers, and creating good writing.
		facilitating the assessing process, more active, not boring learning, the assessing goals are understandable and directed
		provide the opportunities to be active, to get appreciation or additional points and scores through various assessment tracks.
2	IKIP PGRI	good scientific speaking and writing skills, improving the quality and quantity of academic writing assessing.
		accelerating and facilitating the assessing process, more active assessing, comfortable learning, and the goals according to the desired indicators.

		that provide the opportunities to be active, get motivation and appreciation with additional points and scores through various assessmengt tracks
		it is expected that the learning model can encourage the students speak properly and politely, improve their understanding of writing papers (scientific work), and create papers.
3	IAIN	Besides, the product is expected to facilitate the assessing process to run well according to time allocation, be more active, fun, and not boring
		provide the opportunities to understand and knowing the assessment quickly without reducing the level of quality and quantity of the learning.

The Research Findings of the Development Stage

The results of the development of the android-based fast-track scoarboard application prototype based on the focus group discussion include designing SAP (Lecture Program Unit) which consists of graduate competency standards, standards of content, process, and learning assessment. In addition to SAP, the results of the other prototypes are the framework of the android-based fast-track scoarboard application, compiling the android-based fast-track scoarboard application guidebook material, determining evaluations, editing the android-based fast-track scoarboard application manual text, and developing the android-based fast-track scoarboard application.

Preliminary testing on the assessment product done in higher education involves planning and designing the academic writing assessment, assessing the presentation, assessing the discussion, and assessing learning challenges. The result of preliminary testing on product development is obtained through planning, academic writing implementation, and learning assessment. The result of preliminary testing on learning assessment shows and describes various assessments such as paper format, creative idea, topic discussed, data and information resource, discussion, conclusion, and transfer of idea.

The problems that arose in the implementation of the preliminary testing were the unpreparedness of the product implementation, the confused subjects, the different levels of assessment challenges, and the assessment process, inability to adjust with the use of the score board application, not maximum participation, and the time allocation. The effort to improve the prototype of the android-based fast-track scoarboard application guideline is by adding the appropriate assessing stages and activities, making instructions and directives, streamlining learning assessment/application, selecting the material according to the students' needs, allocating the right time duration, and clarifying the stages of measurement in the assessment.

The results of the activities carried out in the development of the assessment product based on the main field testing in higher educations were almost the same as those on the preliminary testing. The difference is the implementation of the assessment product in the main field testing was according to the results of the previous improvement. Overall, the implementation of the main field testing ran smoothly without any constraints. The students played an active role in planning, implementing, and evaluating. The lecturers and students applied the android-based fast-track scoarboard application according to its characteristics. In the end, the establishment of the android-based fast-track scoarboard application in Indonesian Universities was based on various inputs and suggestions from the expert team, lecturers, and students.


The following is the interface of android-based fast-track scoreboard application used to assess academic writing skill.

The research findings of the testing stage
Assessing academic writing in this research uses rating scale as the reliability testing. The table on the rating result from three experts and five indicators is as follows.

| No | Rated Aspect | Judges | | | Σ Xs | Σ Xs^2 |
		I	II	III		
1	Format of the paper	20	20	20	60	43200
2	Creativity of ideas	60	45	60	165	9225
3	Topic	40	30	40	110	4100
4	Data and sources	80	80	80	240	19200
5	Discussion, conclusion, accurate data transference	75	100	100	275	25625
	Σ Xt	275	275	300	850	
	Σ Xt^2	17625	19725	22000		101350

The data description of the initial and final test scores of the conventional academic writing learning in the control class and of the android-based fast-track scoarboard application in the experimental class.
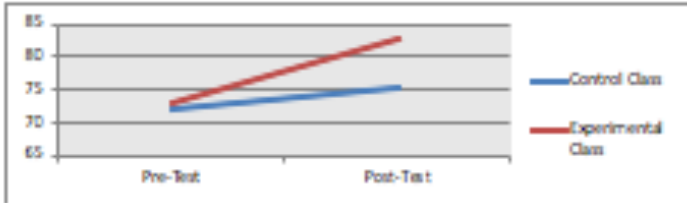

Specifically, here is the data description of this research.

	Conventional assessing class		Android-based fast-track scoarboard application assessing class	
	Pre-test Score	Post-test Score	Pre-test Score	Post-test Score
Score Range	44 – 85	54 – 89	54 – 89	69 – 92
Min	44	54	54	69
Max	85	89	89	92
Mean	71,91	74, 33	72,66	81,64
Standard Deviation	5,99	4,65	7,91	4,86
N	124	124	127	127

The difference of value between control and experimental class is shown on the data description below.

	N	Max	Min	Mean	Sd
Pos-test Kontrol	124	83,89	54,44	74,33	4,65
Post-test Eksperimen	127	88,33	69,44	81,61	4,82

Meanwhile, the mean scores of the students' academic writing competence are as follows.
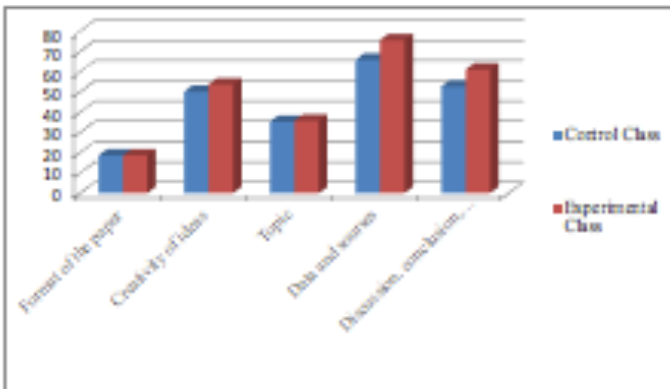
Based on the graph above, the difference of the mean scores between two
class is 7.28. Thus, it shows that there is difference between the academ-
ic writing class using android-based fast-track scoarboard application and
not.

Android-Based Fast-Track Scoarboard Application Testing
After prerequisite testing, involving normality, homogenity of variance,
and t-tes; hypothesis testing can be done. The result shows that the data are
already normally distributed, the variance is homogenous, and each group
has the same level of academic writing.
The hypothesis is that Ho: if tobtain < ttable,there is no difference between
assessment academic writing in the controland experimental classes, Ha: if
tobtain > ttable,there is a difference between assessment academic writing
in the control and experimental classes.

Independent t-test

Class	Model	n	Mean	Sd
Experimental	android-based fast-track scoarboard application	127	81,61	4,82
Control	Conventional learning	124	74,33	4,65

Based on the independent t-test, tobtain = 12.37 while ttable = 1.67. Ha is
accepted if to is bigger than ttable with significant level $\alpha = 0.05$. The test
shows that to > ttable (12.37 > 1.67). Therefore, it can be concluded that
Ho is rejected and Ha accepted. In other words, there is a difference be-
tween assessment academic writing in the controland experimental classes.
The effectiveness test of android-based fast-track scoarboard application
in assessing academic writing shows that, through independent t-test, to
> ttable(12.37 > 1.67). Finally, it can be concluded that there is a differ-
ence of the students' academic writing competence before and after the
implementation of the android-based fast-track scoarboard application.
This shows that android-based fast-track scoarboard application is more
effective than the conventional assessment.

DISCUSSION
Exploration stage research
Based on the research findings, optimization is done by (a) courageously
change the conventional assessment. The existence of innovations is so
important in this era of globalization that the academic writing becomes
stronger and stronger. (b) Academic writing assessing in universities can

be carried out by language institutions so that assessment can be more effective and optimal. (c) improving the understanding so that the undergraduates are inspired to assess their own writing. (d) academic writing assessing is adjusted to the student study program. Appropriate curriculum will make academic writing assessing more effective.

Based on the findings, there are still some problems. The problems, among other things are: (a) the unavailability of android-based fast-track scoreboard application to assess academic writing; (b) the unavailability of academic writing assessment that integrates android-based fast-track scoreboard application in which the lecturers and the undergraduates can interact; (c) the unavailability of action done to improve academic writing assessment.

Based on the analysis of the needs of lecturers and students, it was obtained that: (a) Academic writing assessment is essential to be implemented in higher education. (b) the android-based fast-track scoarboard application in the academic writing course contributes to the students in scientific reading activities directed at their productivity in scientific writing, as well as compiled by the lecturers concerned in accordance with the development of science; (c) Innovative assessment procedure that involves android-based fast-track scoreboard application in assessing academic writing is urgently needed to be implemented as a solution to undergraduates' boredom because the academic writing assessment tends to be monotonous. It also helps the undergraduates and the lecturers to mutually solve problems.

The problem found was that the students' scientific writing skills had not been whetted. This is still an obstacle for the students in expressing their ideas or thoughts in the form of scientific writing. The activity of asking questions or responding to them did not seem to dominate the implementation of academic writing course. The students were passive and respected or accepted the opinions of other students. In the group, there were only a few students who were willing to present the results of their group work. There were only a few students who were able to dominate academic writing course in class.

The development stage research

The results of the expert judgement, the practitioner (lecturer) and the user (student), show that the developed assessment product is categorized as feasible or good. However, this assessment product is inseparable from the input for the perfection of the assessment application. Based on the data

obtained, there were criticisms, suggestions, or comments in the product testing from the experts, lecturers, and students. Based on the criticisms, suggestions, and comments, the improvements have been made to the assessment product developed including: (1) selecting the right aspects of assessment in accordance with the needs of the students, (2) using simple language; (3) increasing the understanding of the aspects of android-based fast-track scoarboard application.

Related to fast-track development, the research findings Yulinawati, Hartati, and Sawitri (2009) entitled Self-Regulated Learning for Fast Track Students (A Phenomenological Qualitative Research in the Faculty of Industrial Engineering of ITB) found that the students could manage their learning time and effort to achieve the stated goals and set their physical and social environment. In addition, the fast track students were also influenced by personality factors, goal settings, effective habits, and the habits that have been done.

The academic writing assessing used by universities currently contains various innovations. The application is not appropriate and maximal for the student's self-development. The previous semester assessment was still not effective so that not all universities are ready to implement the assessment system and pattern. This is different from the android-based fast-track scoarboard application that has the advantages such as: (1) the assessment covers all academic writing aspects; (2) the integrated assessment through various fast tracks; (3) the active involvement of all students in planning, implementing and evaluating; (4) the existence of the authentic summary and assessment and appreciation for the best students and the best groups at the end. (5) the application is easy, fast, and efficient to use.

The testing stage research

The conventional academic writing product in the effectiveness test of the model aimed to determine the effectiveness of academic writing learning. This assessing did not experience any difficulties. The difference from the previous assessing activities is only in the existence of the pre-test and post-test in the twelve-time intervals of face-to-face meetings. This is the same as what happened to the students. There were no special things that occurred in the assessing process for the twelve-time face-to-face meetings.

In the development of a android-based fast-track scoarboard application in assessing academic writting focuses on planning, implementing, and evaluating. The assessment was designed by combining various assessment

tracks to facilitate the students and lecturers in understanding the process and outcomes. Therefore, from this product development, it is expected that the students can be more integrated, holistic and statistics. The meant thing is that the undergraduates are being competitive in diverse assessments.

The competencies that can determine the quality of assessment in academic writing with the android-based fast-track scoarboard application are as follows: (1) ability to plan assessing, (2) ability to carry out academic writting, (3) ability to assess academic writting, (4) ability to choose assessment strategies, and (5) ability to assessing small groups and individuals.

The results of testing the effectiveness of the android-based fast-track scoarboard application in assessing academic writting can be summed up as follows: (1) conducting workshops and Focus Group Discussions (FGD), (2) implementing Focus Group Discussion (FGD), (3) studying the theories offered by researchers, (4) carrying out the initial test (pre-test), (5) applying theory to classroom assessment, (6) conducting evaluation and reflection at the end of each lesson, (7) carrying out the final test (post-test), and (8) delivering each result of evaluation and reflection to the researcher.

From the results of the evaluation, reflection and the observation of the researchers, it was found that lecturers were very happy, eager to carry out the theory and concept of the android-based fast-track scoarboard application in assessing academic writting and try to apply it in assessment. For the students, they paid more attention to the assessmen process which was relevant and needs-based assessing. They were more confident, happy in joining the assessing activities, satisfied with their outcomes, and enthusiastic because the assessing was carried out actively, not boring, varied, and fun. From the existing data from the product effectiveness test, it is concluded that the academic writing using the android-based fast-track scoarboard application is better (with an average post-test score of 81.61) compared to that using conventional assessment (with an average post-test score of 74.33).

CONCLUSION

Hasil uji keefektifan menunjukkan bahwa mahasiswa yang penilaian menulis ilmiahnya dengan aplikasi scoreboard fast-track berbasis android lebih baik dan efektif daripada mahasiswa yang penilaian menulis ilmiah secara konvensional. Selain itu, produk ini juga menjadi alternatif untuk mengurai masalah penilaian menulis ilmiah yang selama ini belum mak-

simal.

Based on the positive responses from the lecturers and the students supported by the acceptance of the academic writing assessment experts, education and assessment experts, and policy makers, it can be concluded that the android-based fast-track scoarboard application in assessing academic writting is appropriate and acceptable to apply. Based on the description and support of various empirical data, the android-based fast-track scoarboard application can be implemented according to the needs of the lecturers and students. This assessment product is proven to significantly improve the academic writing for the students in higher education. The effectiveness test results show that the students who follow academic writing assessing class with the android-based fast-track scoarboard application are better and more effective than those who follow the conventional academic writing assessing class. In addition, this product also becomes an alternative to unravel the problem of academic writing assessing which has not been maximized.

REFERENCES

ASROPUDIN, P. 2013. Kamus Teknologi Informasi. Bandung: Titian Ilmu. Indonesia.

CHISTENSEN, L. B. 1978. Eksperimental Methodology. Boston: Allyn & Bacon. Inc. The United States of America.

COHEN, L., MANION, L., & MORRISON, K. 2000. Research Methods in Education. London: Routledge-Falmer Taylor & Francis Group. United Kingdom.

CURRICULUM AND ASSESSMENT DIVISION. 2010. Guidance on the teaching of writing skills. Department for Children, Education, Lifelong Learning and Skills Wales. The Welsh Assembly Government's website. United Kingdom.

DEPARTEMEN PENDIDIKAN AMERIKA SERIKAT. 2014. Fast Track: Elementary School. Amerika: Institute Education Sciences. The United States of America.

HARIADI, T. 2016. Pengembangan Model Pembelajaran Bahasa dan Sastra Indonesia Berbasis Jalur Cepat (Fast Track). Prosiding Konferensi Internasional VI Bahasa, Sastra, dan Budaya Daerah Indonesia. Ikatan Dosen Budaya Daerah Indonesia. Lampung. 688–694. Indonesia.

HILLOCKS, G. J. 2011. Teaching Argument Writting, Grades 6-12. Portsmouth: Heinemann. United Kingdom.

KEARRNEY, J., WOOD, L., SKERRITT, O. Z. 2013. Using Participatory

Action Learning and Action Research (PALAR). International Journal of Community Research and Engagement, 6, 113-130. Australia.

MAIYANA, E. 2018. Pemanfaatan Android Dalam Perancangan Aplikasi Kumpulan Doa. Jurnal Sain dan Informatika, 4.11, 54-67. Indonesia.

MCCONNEY, A., PRICE, A., MCCONNEY, A. W. 2012. Fast Track Teacher Education a Review of the Research Literature on Teach For All Schemes. Australia, A: Murdoch University. Australia.

MOLEONG, L. J. 2010. Metodologi Penelitian Kualitatif. Bandung: PT Remaja Rosdakarya. Indonesia.

O'MALLEY, C., VAVOULA, G., GLEW, JPP., TAYLOR, J., SHARPLES, M. & LEFRERE, P. 2003. Guidelines for learning/Teaching/Tutorial in a Mobile Envitonment. United Kingdom.

PARRISH, D. R. 2016. Principles and a model for advancing future-oriented and studentfocused teaching and learning. Journal of procedia - Social and Behavioral Science Journal, 228, 311–315. Netherlands.

PERMENRISTEKDIKTI. 2015. Peraturan Kementrian Riset, Teknologi, dan Pendidikan Tinggi Republik Indonesia Nomor 44 Tahun 2015 tentang Standar Nasional Pendidikan Tinggi. Jakarta: Kementrian Riset, Teknologi, dan Pendidikan Tinggi. Indonesia.

SUTOPO, H. B. 2002. Metodologi Penelitian Kualitatif. Surakarta: Sebelas Maret University Press. Indonesia.

TJATURANO., MOCHTAR, I. B. 2008. Pengembangan Metode Fast-Track untuk Mereduksi Waktu dan Biaya Pelaksanaan Proyek Studi Kasus Rumah Menengah di Malang, Jawa Timur. Journal of Media Komunikasi Teknik Sipil, 1, 39 – 54. Indonesia.

TURRENT, V. 2009. Expanding Support for Education in Fragile States: What Role for the Education for All–Fast Track Initiative?. United Kingdom: Centre for International Education, Sussex School of Education & Social Work. United Kingdom.

UNIVERSITAS OF TECHNOLOGY SYDNEY. 2013. Academic Writing. Sydney: UTS. Australia.

YULINAWATI, HARTATI, DAN SAWITRI. 2009. Self-Regulated Learning Mahasiswa Fast Track (Sebuah Penelitian Kualitatif Fenomenologis di Fakultas Teknik Industri ITB). Undergraduate thesis: Universitas Diponegoro. Indonesia.

UNIVERSIDAD DEL ZULIA