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PREFACE

Welcome to the 5th Proceeding of International Conference of Information Technology Systems and Innovation (ICITSI) 2018. The international conference was held in Bandung and Padang, 22nd-26th October 2018. ICITSI 2018 is hosted by School of Electrical Engineering and Informatics, Institut Teknologi Bandung in collaboration with Faculty of Information Technology Universitas Andalas, and sponsored by IEEE Indonesia Section.

We invited world renowned academics for keynote speakers, namely Prof. Minoru Okada - Nara Institute of Science and Technology, Professor of Information Science, Dr. Ir. Arry Akhmad Arman, M.T – Director of STI, Institut Teknologi Bandung, and Dr. Eng. Khoirul Anwar - Telkom University.

We have received 298 submissions for ICITSI 2018. After thorough reviews by reviewers, our Program Committee accepted 109 papers (acceptance rate: 36.58%) for the conference. Afterwards, 103 from 109 accepted papers were officially registered for the conference noted by camera-ready submission for IEEExplore publication and conference proceeding. Later, all authors with registered papers are enlisted to present the paper at the conference. We would like to thank all invited speakers, authors, reviewers, participants, committee members, and sponsors for their supports and contributions in this conference.

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Conference Paper

Comparative Analysis of Software Quality Model in the Selection of Marketplace E-Commerce

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Comparative Analysis of Software Quality Model In The Selection of Marketplace E-Commerce

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***Abstract*—E-commerce system is very helpful for people in buying and selling transactions. Various existing marketplaces have their advantages and disadvantages. Software quality models can provide an assessment of each e-commerce marketplace system. This research analyzes the results of e-commerce selection by using several software quality models that are implemented with the analytical hierarchy process using Expert Choice tools. The assessment in this research using criteria from a combination of several quality software models to obtain which criteria have the highest percentage value and determine the quality of an e-commerce marketplace system. Each quality model software has different evaluation results from each other. This difference because the assessment criteria between one quality model and another.**

Keywords—recommendations, e-commerce, software quality model, analytical hierarchy process

I. INTRODUCTION

The use of e-commerce as a place for the sale and purchase of goods is very helpful for the community. No need to go far to the seller's location to get the desired product. The ease of shopping in every e-commerce makes the increase in sales and purchase transactions increase. The rapid growth of online buying and selling transactions is certainly followed by the many new e-commerce marketplace systems with their respective advantages and disadvantages.

Alexa Internet rank results in July 2018 obtained e-commerce marketplace ratings that are most frequently accessed by people in Indonesia. There are five e-commerce marketplaces that are widely accessed and used by people in Indonesia in online transactions so that they are used as objects in this research, namely Tokopedia (TKP), Bukalapak (BKL), Lazada (LZD), Shopee (SHP) and Blibli (BLI).

Table I contains the rank of the marketplace based on the number of website visits according to Alexa. The comparison of the number of downloads from mobile applications from the top five that get the highest rating and the most downloaded in PlayStore on Q2-2018 can be seen in Table II. Both tables can illustrate some of the ranking differences from the five e-commerce marketplaces.

TABLE I. E-COMMERCE RANK BY FREQUENTLY ACCESSED BY ALEXA

Rank	The number of daily website visits		
	Marketplace	**Daily Time (mm:ss)**	**Daily Pageview**
6	Marketplace TKP	8:23	5.14
7	Marketplace BKL	6:54	4.19
40	Marketplace SHP	7:56	4.38
41	Marketplace BLI	2:27	2.20
47	Marketplace LZD	8:01	5.02

TABLE II. E-COMMERCE RANK BY RATING IN PLAYSTORE

Rank	Rating E-Commerce Application in PlayStore			
	Marketplace	**Rating Value**	**Responden**	**Total Downloads**
3	Marketplace TKP	4.4	988.746	± 10 million
4	Marketplace BKL	4.4	661.569	± 10 million
1	Marketplace SHP	4.2	608.272	± 10 million
5	Marketplace BLI	4.2	171.477	± 10 million
2	Marketplace LZD	4.2	1.572.427	± 10 million

Based on data from the table I and table II, it can be concluded that each mobile e-commerce application has a different ranking position. It concludes that each e-commerce marketplace has advantages and disadvantages of each so that it has a different assessment from each user.

Many factors determine why people are more often buying and selling transactions through the three marketplace websites. To find out some of the factors that are the criteria of the community in choosing which e-commerce marketplace is the best and in accordance with the desired, it is necessary to conduct an assessment of e-commerce using the existing software quality models. Some quality software criteria are used in the assessment so that it can know what criteria have the highest value so that it becomes a determinant in the assessment of a software quality.

The ISO 9126 software quality model generally consists of external, internal and quality in use metrics [1]. This model is widely used in software assessments, such as assessing the quality of web-based applications [2], online exam systems [3] as well as for decision support systems [4]. ISO 9126 has identified 6 main criteria, namely functionality, reliability, usability, efficiency, maintainability, and portability [5].

McCall quality model was proposed by Jim McCall et al. [6]. This model identifies the quality of a software viewed from three perspectives, namely from operational, revision and transition [7]. The main criteria in the McCall model are correctness, efficiency, integrity, usability, maintainability, flexibility, testability, portability, reusability, interoperability [8]. The criteria of the McCall model are widely used to assess the quality of a software [9] [10] and others [11] [12].

The Boehm model can be said to be a continuation model of the McCall quality model [13]. Boehm quality model has 7 criteria factors used to assess the quality of software consisting of efficiency, usability, portability, reliability, testability, understandability and flexibility [14]. The Boehm model is also widely used as a reference not only to assess a software but also used in industry assessments [15] [16] [17].

There are many other models that can be used as references when assessing the quality of software other than the ISO 9126 model, McCall model, and Boehm. Other

models are FURPS model [18], Dromeys quality model [19] [20], Ghezzi model [21] and other quality model software frameworks as performed by M. Usman [22] and Robert et al [23] in metrics the quality of the agile development model, and Deepshika [24] which analyzes software quality models for organizations.

Software quality contained in this research will be analyzed for the difference in value in the case study of the implementation of the selection of the e-commerce marketplace in Indonesia. The selection uses a comparison of analytical hierarchy process (AHP). AHP in the selection of software has been implemented a lot, including in the selection of 3D scanner applications [25], ERP software selection [26] even in the selection of flight ticket booking applications [27]. The AHP method was created by Saaty based on a comparison of many criteria. AHP can help in decision making even though the criteria that form the basis of the assessment are based on the results of judgment, feeling, and experience [28].

This research was conducted to see the results of the assessment of users of the five e-commerce marketplaces. The assessment was conducted using the software quality model criteria from the analysis of several existing models, implemented using the analytical hierarchy model method so that the results obtained by the weights of each of these criteria were obtained.

II. METHOD

The framework method of this research can be seen in Fig. 1 below.

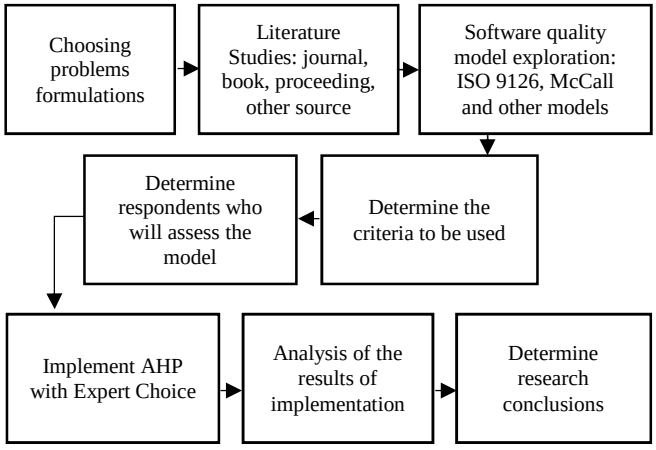

Fig. 1. Method framework model

Formulating the problem is done after seeing the phenomenon of the increasing trend of online transactions using the e-commerce marketplace. Several features of advantages and disadvantages were found which made ranking differences in the use of e-commerce system applications.

To find out the reasons that cause users to prefer to use applications or features that exist in the e-commerce system, there should be an exploration of library materials related to software quality and methods for assessment, so that the criteria and assessment techniques that will be used are obtained.

The comparative study results from previous studies [1] regarding software quality models can be seen in table III. Application quality model on e-commerce web application according to Rahman [29] which can be used is the criteria of functionality, security, usability, reliability, and efficiency.

This research compares each assessment of each criterion that is in the five software quality models such as that in table III. The assessment is carried out by one person who has experience in conducting transactions online through the five marketplaces that are used as research objects and understands the process of assessing a software quality.

TABLE III. SOFTWARE QUALITY MODEL COMPARISON

Criteria	McCall	Boehm	Dromey	FURPS	ISO 9126
Correctness	✓				
Reliability	✓	✓	✓	✓	✓
Efficiency	✓	✓	✓		✓
Integrity	✓				
Usability	✓		✓	✓	✓
Maintainability	✓		✓		✓
Testability	✓		✓		
Flexibility	✓				
Portability	✓	✓	✓		
Reusability	✓				
Interopability	✓	✓			
Human Engineering		✓			
Understandability		✓			✓
Modifiability		✓			
Functionability			✓	✓	✓
Performance				✓	
Supportability				✓	

III. RESULT AND DISCUSSION

A. *Results from the McCall software quality model*

This research focuses on assessing criteria from the user side of the software, not the assessment of criteria by a programmer. In the McCall model the criteria that will be used focus on product operations, namely correctness, reliability, efficiency, integrity and usability [30]. The hierarchical structure used can be seen in Fig. 2.

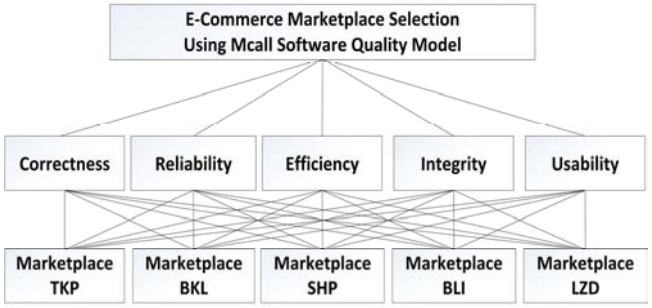

Fig. 2. The structure hierarchy of McCall software quality model

The results obtained from the AHP implementation using the expert choice tools can be obtained in Fig. 3.

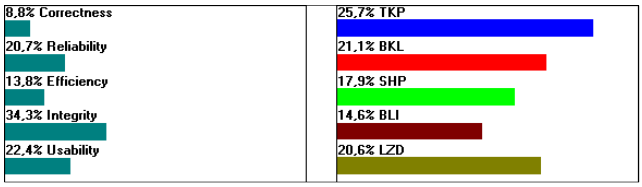

Fig. 3. Asessment results based on the McCall quality software model

Based on the implementation of the McCall quality software model, it was found that the TKP marketplace had the highest score of 25.7% followed by the BKL marketplace with a value of 21.1%. The third position is the LZD marketplace with a value of 20.6%, while the SHP marketplace gets a value of 17.9% and a BLI with a value of 14.6%.

B. Results from the Boehm software quality model

The criteria used by the Boehm software quality model are reliability, efficiency, and understandability. This is because these three criteria directly interact with application users. The hierarchical structure used can be seen in Fig. 4

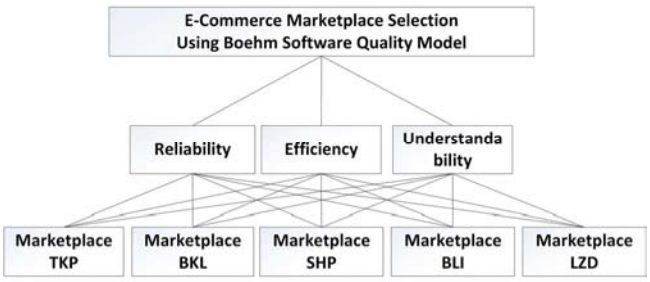

Fig. 4. The structure hierarchy of Boehm software quality model

The results of the analysis obtained from the Boehm software quality model can be seen in Fig.5.

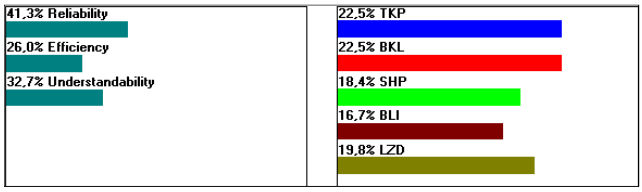

Fig. 5. Asessment results based on the Boehm quality software model

Based on the implementation of the Boehm software quality model, it was found that the TKP and BKL marketplace had the highest score of 22,5% followed by the LZD marketplace with a value of 19,8%. The fourth position is the SHP marketplace with a value of 18,4% and BLI with a value of 16,7%.

C. Result from Dromey Software Quality Model

The criteria used by the Dromey software quality model are reliability, efficiency, usability and functionability. The hierarchical structure used can be seen in Fig. 6.

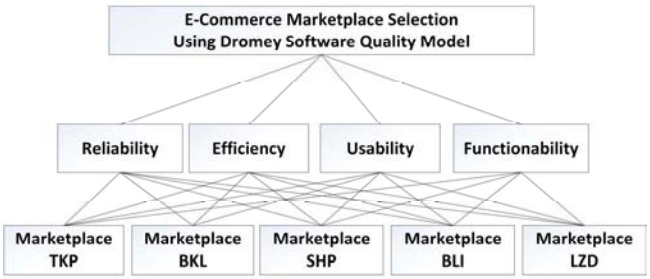

Fig. 6. The structure of Dromey software quality model

The analysis results obtained by the Dromey quality software can be seen in Fig. 7.

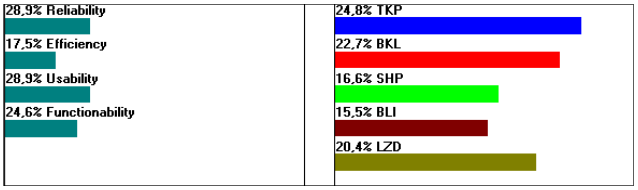

Fig. 7. Asessment results based on the Dromey quality software model

Based on the implementation of the Dromey software quality model, it was found that the TKP marketplace had the highest score of 24.8% followed by the BKL marketplace with a value of 22.7%. The third position is the LZD marketplace with a value of 20.4%, while the SHP marketplace gets 16.6% and BLI with a value of 15.5%.

D. Result from FURPS software quality model

The criteria used by the FURPS software quality model are reliability, usability, functionability, supportability. The hierarchical structure used can be seen in Fig. 8.

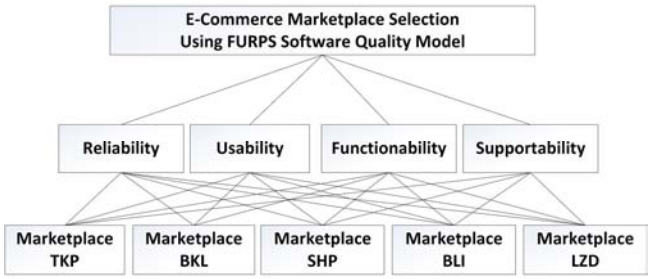

Fig. 8. Asessment results based on the FURPS quality software model

The analysis results obtained by the FURPS software quality model can be seen in Fig. 9.

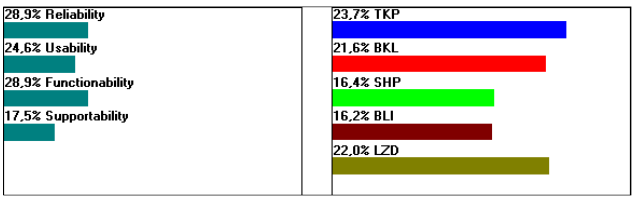

Fig. 9. Asessment results based on the FURPS quality software model

Based on the implementation of the FURPS quality software model, it was found that the TKP marketplace had the highest score of 23.7% followed by the LZD marketplace with a value of 22.%. The third position is the BKL marketplace with a value of 21.6%, while the SHP marketplace scores 16.4% and BLI with a value of 16.2%.

E. Result from ISO-9126 software quality model

Criteria used from ISO-9126 software quality model are reliability, efficiency, usability, understandability, functionability. The hierarchical structure used can be seen in Fig. 10.

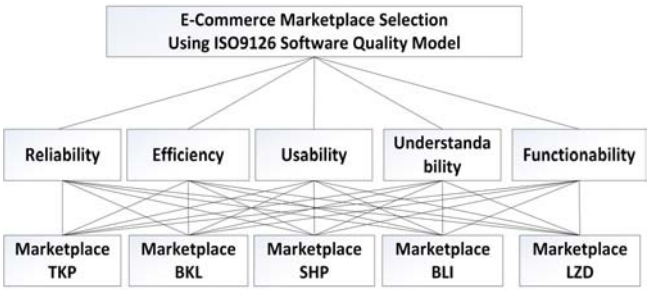

Fig. 10. The structure hierarchy of the ISO-9126 software quality model

The analysis results obtained from the ISO 9126 quality model software model can be seen in Fig. 11.

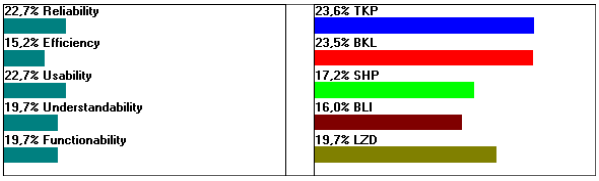

Fig. 11. Asessment results based on the FURPS quality software model

Based on the implementation of the ISO 9126 quality software model, it was found that the TKP marketplace had the highest score of 23.6% followed by the BKL marketplace with a value of 23.5%. The third position is the LZD marketplace with a value of 19.7%, while the SHP marketplace scores 17.2% and BLI with a value of 16 %.

F. Results from a combination of several quality software models

Based on the previous analysis using the criteria of the five software quality models, this research also combines several criteria derived from five different quality model software into one hierarchical model structure. Combined criteria used are correctness, reliability, efficiency, integrity, usability, understandability, functionability and supportability. The hierarchical structure used in the assessment of the combined criteria can be seen in Fig. 12.

The results obtained from eight criteria assessed using AHP can be seen in Fig. 13.

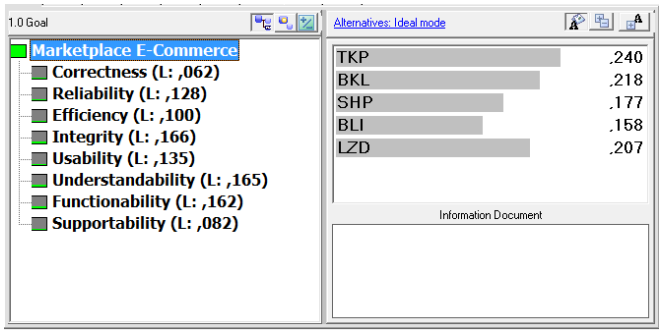

Fig. 13. Marketplace assessment results using combined criteria

Based on the explanation in Fig.13 its was found that when using the criteria of software quality model combined, then the marketplace that gets the highest score is the TKP marketplace with a value of 24%, then the marketplace BKL with a value of 21.8%, the LZD marketplace by 20.7%, the marketplace SHP 17.7% and BLI gets a value of 15.8%.

The graph in Fig. 14 illustrates the different values of the five marketplaces.

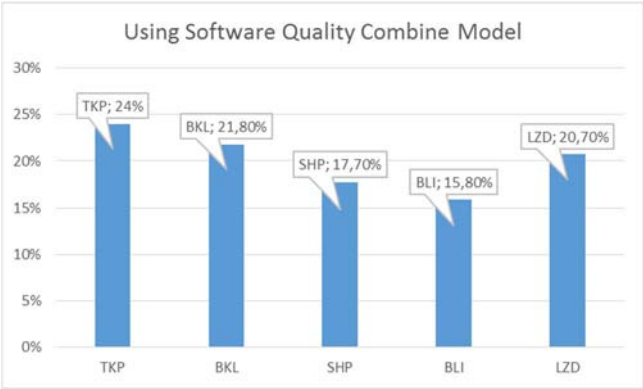

Fig. 14. Graph comparison of the results of combining quality software models

Comparison of alternative values obtained overall from the model implemented can be seen in Fig. 15.

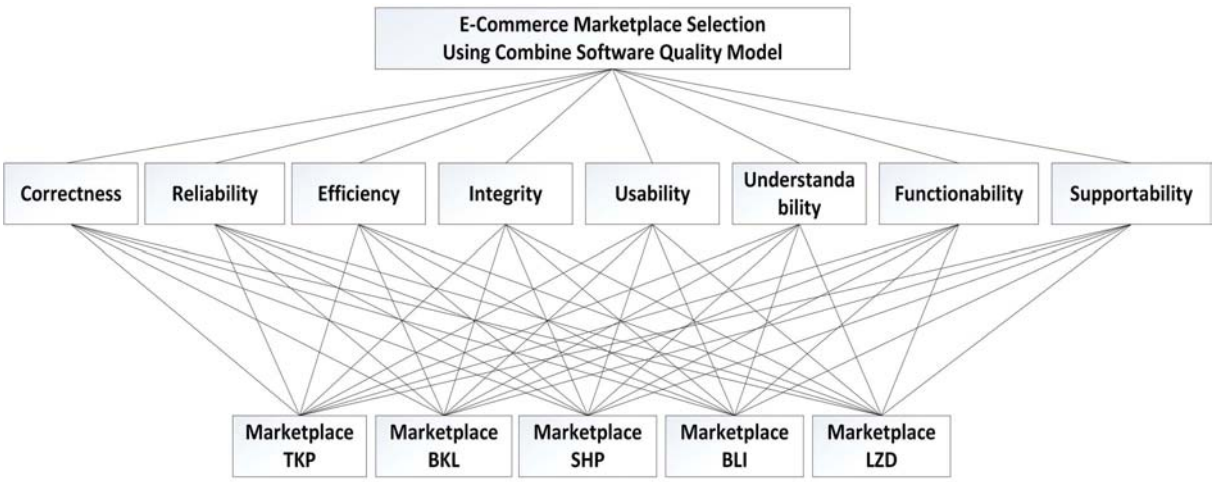

Fig. 12. The structure hierarchy using combine software quality model

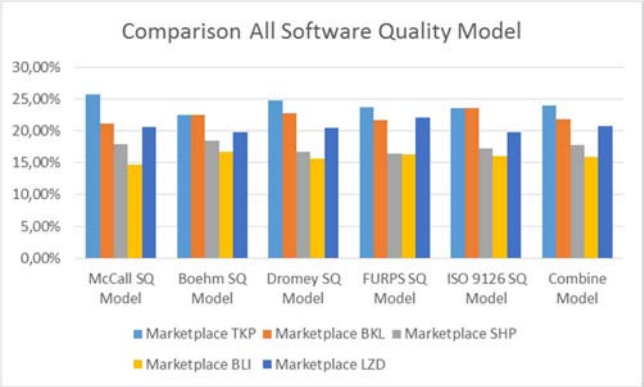

Fig. 15. Comparison from combine software quality model

The percentage of each of the criteria used in the combined model of software quality after an assessment can be seen in the graph in Fig. 16.

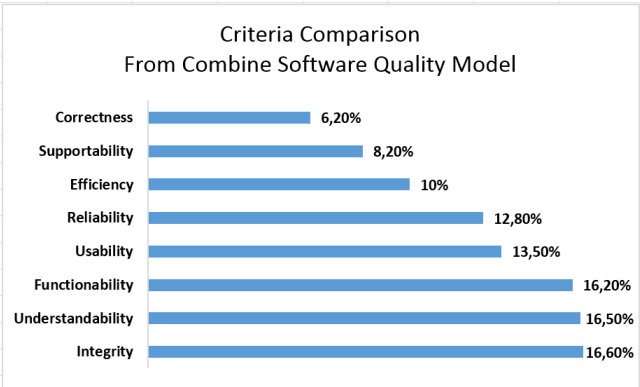

Fig. 16. Criteria comparison from combine software quality model

Based on the results of the criteria assessment as in Fig. 16 it was found that there were three criteria that had the highest rating percentage so that it had the most influence on the quality of an e-commerce marketplace system. These three criteria are integrity with a value of 16.60%, followed by understandability criteria with a value of 16.50% and functionability criteria with a percentage of 16.20%. This can be a suggestion and input for each e-commerce marketplace to pay more attention to the integrity, understandability and functionability of their systems to have better quality.

After the test results obtained using a combination of software quality criteria of the model, further analysis of the sequence obtained based on other aspects in addition to assessment of software quality models, these aspects are based on the total visitors, daily frequently accessed, as well as software from PlayStore ranked. The results of the comparison in general can be seen in table IV.

TABLE IV. GENERAL MARKETPLACE RANKING COMPARISON

Marketplace	General Marketplace Ranking Comparison			
	Rank (Total Visitor)	Rank (Accessed)	Rank (Rating)	Rank (Software Quality)
Marketplace TKP	1	6	3	1
Marketplace BKL	2	7	4	2
Marketplace LZD	3	47	2	3
Marketplace SHP	4	40	1	4
Marketplace BLI	5	41	5	5

Table IV shows that there is a similarity in rank between the order based on the total visitor in the e-commerce marketplace in the order based on the assessment using the combined quality software.

IV. DISCUSSION

In this section, the researcher wants to discuss the results of the research that has been done. The results obtained in this study depend heavily on the assessment of the assessor. So the value obtained will be different if the research model is assessed by a different assessor.

For further research, it is very possible if the model that has been made in this research is assessed not only by one person but by many people so that the calculation process in AHP uses the concept of combined values of paired pairs. It should be emphasized that AHP is not too concerned with the number of respondents who are assessors but must be able to understand and represent the context and object of research conducted.

V. CONCLUSION

Based on the results of the implementation and comparison of software quality models used, it was found that there was no difference in the first rank of the assessment using the different quality software. But there is a difference between the assessment based on the quality software model and the ranking by Alexa Internet and the position on Google Play. This result can be different depending on the assessor making the assessment.

VI. ACKNOLEDGMENT

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REFERENCES

[1] Suradi, N.R.M., Kahar, S. and Jamaluddin, N.A.A., 2018, “Identification of software quality characteristics on academic application in higher education institution (HEI)”. *Journal of Telecommunication, Electronic and Computer Engineering* (JTEC), vol. 10, no. 2-7, pp.133-136, 2018.

[2] D. Nabil, A. Mosad, and H. A. Hefny, “Web-based applications quality factors: a survey and a proposed conceptual model,” *Egypt. Informatics Journal*, vol. 12, no. 3, pp. 211–217, 2011.

[3] Veronica, M., Antoni, D. and Akbar, M, “Adopsi website quality evaluation method (WebQem) dan iso 9126 untuk mengukur service quality pada ujian online. *Teknomatika*, vol. 8, no. 1, 2018.

[4] Wibowo, R.M., Erna, P.A. and Hidayah, I., “Heuristic evaluation and user testing with ISO 9126 in evaluating of decision support system for recommendation of outstanding marketing officer”. *In Sustainable Information Engineering and Technology* (SIET) *2017 International Conference IEEE*, pp. 454-458, 2017.

[5] Ahmad, S.F., Beg, M.R. and Haleem, M., 2013. “A comparative study of software quality models”. *International Journal of Science, Engineering and Technology Research*, vol. 2, no. 1, p.172, 2013.

[6] Tabassum, A., Bhatti, S.N., Asghar, A.R., Manzoor, I. and Alam, I., “Optimized quality model for agile development : extreme programming (XP) as a case scenario”. *International Journal of Advanced Computer Science and Applications*, vol. 8, no. 4, pp.392-400, 2017.

[7] Garcés, L., Ampatzoglou, A., Avgeriou, P. and Nakagawa, E.Y., 2017. “Quality attributes and quality models for ambient assisted living software systems: A systematic mapping”. *Information and Software Technology*, vol. 8, no. 2, pp.121-138, 2017.

[8] Lee, M.C., “Software quality factors and software quality metrics to enhance software quality assurance”. *British Journal of Applied Science & Technology*, vol. 4, no 21, pp.3069-3095, 2014.

[9] Sarrab, M., Elbasir, M. and Alnaeli, S., “Towards a quality model of technical aspects for mobile learning services: An empirical investigation”. *Computers in Human Behavior*, pp.100-112, 2016.

[10] Mohsin, A., Naqvi, S.I.R., Khan, A.U., Naeem, T. and AsadUllah, M.A., “A comprehensive framework to quantify fault tolerance metrics of web centric mobile applications”. *In Communication Technologies (ComTech), 2017 International Conference on IEEE* pp. 65-71, 2017.

[11] Lee, H.L. and Chin, K.S., “Development of a systematic model for improving software quality in the financial service organization In Management Challenges in a Network Economy“ *Proceedings of the MakeLearn and TIIM International Conference* pp. 361-370. ToKnowPress, 2017.

[12] Muñoz, R.G., Shehab, E., Weinitzke, M., Fowler, C. and Baguley, P., “Operational software maturity: an aerospace industry analysis” *World Academy of Science, Engineering and Technology, International Journal of Computer, Electrical, Automation, Control and Information Engineering*, vol.11 no. 9, pp.973-982, 2017.

[13] Dubey, S.K., Ghosh, S. and Rana, A, “Comparison of software quality models: an analytical approach”. *International Journal of Emerging Technology and Advanced Engineering*, vol. 2, no. 2, pp.111-119, 2012.

[14] Aneesa Rida Asghar, Shahid Nazir Bhatti, Atika Tabassum, “The mpact of analytical assessment of requirements prioritization models: an empirical study”, *International Journal of Advanced Computer Science and Applications(IJACSA)*, vol. 8, no. 2, 2017.

[15] Xu, X., Li, Y., Li, L., Di, F., Yang, Q.B., Gong, L.L. and Zhang, L.P., “Quality measurement and evaluation technology research of power grid dispatching automation system software”. *In International Conference on Geo-Informatics in Resource Management and Sustainable Ecosystems*. Springer, Singapore, pp. 230-237, 2016.

[16] Seo, D., Shin, D. and Bae, D.H.,“Quality-based software project staffing and scheduling with project deadline”. *Journal of KIISE*, vol. 42, no. 7, pp.878-888, 2015.

[17] Sudhaman, P. and Thangavel, C., “Efficiency analysis of ERP projects—software quality perspective.” *International Journal of Project Management*, vol. 33, no.4, pp.961-970, 2015.

[18] Zainab Sultan, Rabiya Abbas, Shahid Nazir Bhatti and S. Asim Ali Shah, “Analytical review on test cases prioritization techniques: An empirical study”, *International Journal of Advanced Computer Science and Applications (IJACSA*), vol. 8, no. 2, 2017.

[19] Imreh, R. and Raisinghani, M., “Impact of agile software development on quality within information technology organizations”, *Journal of Emerging Trends in Computing and Information Sciences*, vol. 2, no. 10, pp. 460-475, 2011.

[20] Naragani, D.P. and Uniyal, P., “Comparative analysis of software quality models. *International Journal of Computer Science and Management Research*, vol. 2, no. 3, 2013.

[21] Scotch Ambler, “Agile modeling: effective practices for extreme programming and the unified process”, Wiley; 1 edition, 2012.

[22] Malik, M.U., Nasir, H. and Javed, A., “An efficient objective quality model for agile application development”. *International Journal of Computer Applications*, vol. 85, no. 8, 2014.

[23] Imreh, R. and Raisinghani, M., “Impact of agile software development on quality within information technology organizations”, *Journal of Emerging Trends in Computing and Information Sciences*, vol. 2, no. 10, pp.460-475, 2011.

[24] Jamwal, D., “Analysis of software quality models for organizations”, *International Journal of Latest Trends in Computing*, vol. 1, no. 2, 2010.

[25] Di Angelo, L., Di Stefano, P., Fratocchi, L. and Marzola, A., “An AHP-based method for choosing the best 3D scanner for cultural heritage applications”. *Journal of Cultural Heritage*, 2018.

[26] Armand, M.T. and Roger, A.E., “An AHP algorithm for an effective ERP type selection based on the african context”. *The Electronic Journal of Information Systems in Developing Countries*, vol. 83, no. 1, pp.1-17, 2017.

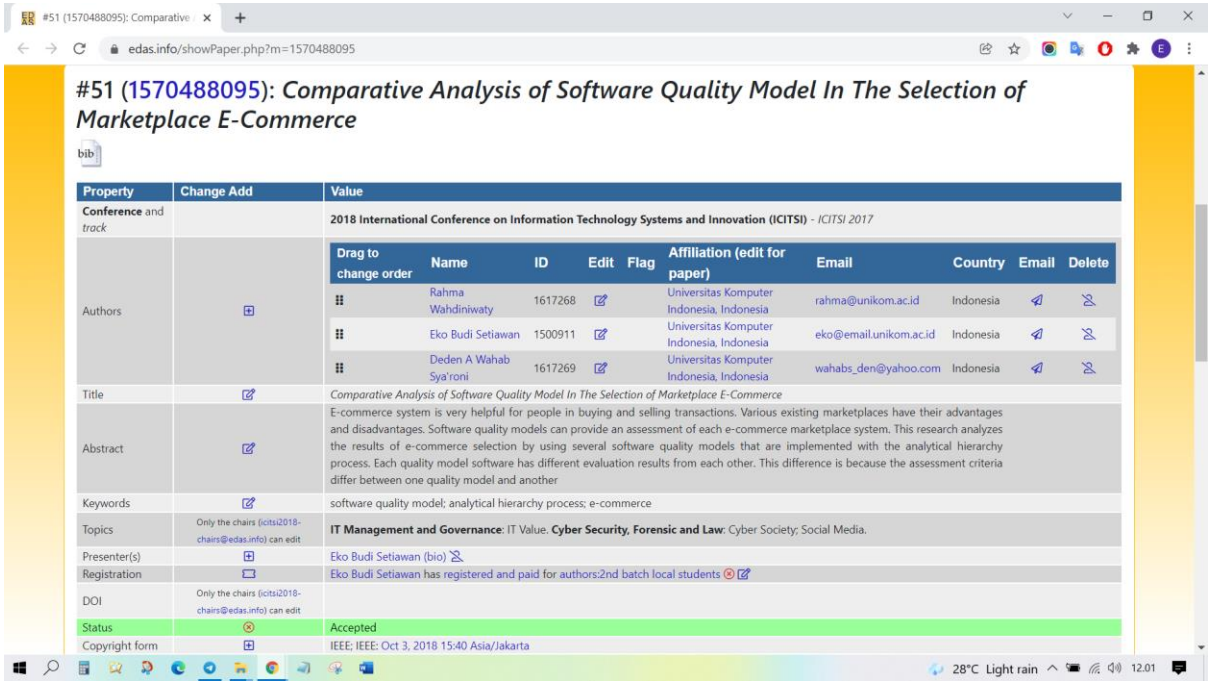
[27] Andalia, F., “Implementation analytical hierarchy process on airplane ticket booking application selection with software quality requirements and evaluation ISO/IEC 25010: 2011”. *International Journal of New Media Technology*, vol. 4, no. 2, pp.126-130, 2017.

[28] Sale, M.L., Cheek, R.G. and Sale, R.S., “Using AHP to develop a mesure of webpage presence”. *Academy of Strategic Management Journal*, vol. 14, no. 1, p.109, 2015.

[29] Rahman, W.N.W.A., Talha, H., Josiah, B., Adamu, L., Liming, W. and Rosli, N.S.M., “Software quality assurance–e-commerce customers satisfaction in requirements engineering process”, *International Journal of Software Engineering and Its Applications*, vol. 9, no. 3, pp.57-70, 2015.

[30] Tripathi, S., “A survey on quality perspective and software quality models” *IOSR Journal of Computer Engineering (IOSR-JCE)*, pp.2278, 2014.

Korespondensi / Proses Review



#51 (1570488095): *Comparative Analysis of Software Quality Model In The Selection of Marketplace E-Commerce*

bib

Property	Change Add	Value
Conference and *track*		**2018 International Conference on Information Technology Systems and Innovation (ICITSI)** - *ICITSI 2017*
Authors		Drag to change order / Name / ID / Edit / Flag / Affiliation (edit for paper) / Email / Country / Email / Delete Rahma Wahdiniwaty, 1617268, Universitas Komputer Indonesia, Indonesia, rahma@unikom.ac.id, Indonesia Eko Budi Setiawan, 1500911, Universitas Komputer Indonesia, Indonesia, eko@email.unikom.ac.id, Indonesia Deden A Wahab Sya'roni, 1617269, Universitas Komputer Indonesia, Indonesia, wahabs_den@yahoo.com, Indonesia
Title		*Comparative Analysis of Software Quality Model In The Selection of Marketplace E-Commerce*
Abstract		E-commerce system is very helpful for people in buying and selling transactions. Various existing marketplaces have their advantages and disadvantages. Software quality models can provide an assessment of each e-commerce marketplace system. This research analyzes the results of e-commerce selection by using several software quality models that are implemented with the analytical hierarchy process. Each quality model software has different evaluation results from each other. This difference is because the assessment criteria differ between one quality model and another
Keywords		software quality model; analytical hierarchy process; e-commerce
Topics	Only the chairs (icitsi2018-chairs@edas.info) can edit	**IT Management and Governance**: IT Value. **Cyber Security, Forensic and Law**: Cyber Society; Social Media.
Presenter(s)		Eko Budi Setiawan (bio)
Registration		Eko Budi Setiawan has registered and paid for authors:2nd batch local students
DOI	Only the chairs (icitsi2018-chairs@edas.info) can edit	
Status		Accepted
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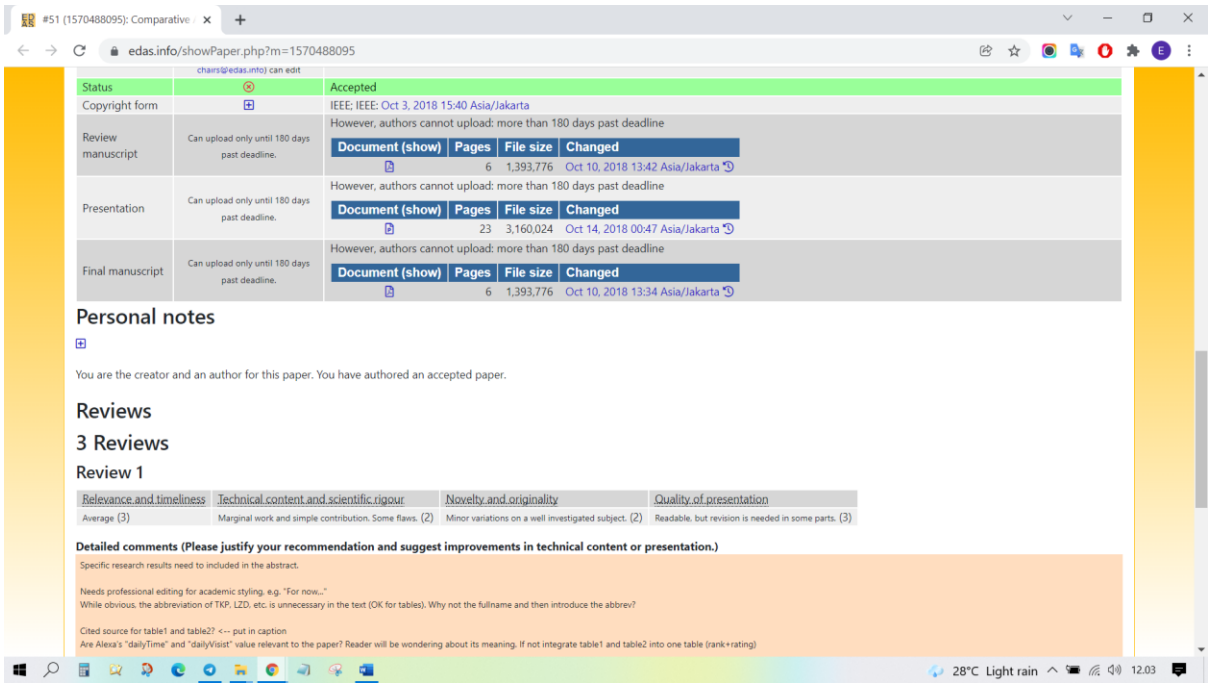

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Review manuscript	Can upload only until 180 days past deadline.	However, authors cannot upload: more than 180 days past deadline Document (show) / Pages / File size / Changed 6 / 1,393,776 / Oct 10, 2018 13:42 Asia/Jakarta
Presentation	Can upload only until 180 days past deadline.	However, authors cannot upload: more than 180 days past deadline Document (show) / Pages / File size / Changed 23 / 3,160,024 / Oct 14, 2018 00:47 Asia/Jakarta
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Reviews

3 Reviews

Review 1

Relevance and timeliness	Technical content and scientific rigour	Novelty and originality	Quality of presentation
Average (3)	Marginal work and simple contribution. Some flaws. (2)	Minor variations on a well investigated subject. (2)	Readable, but revision is needed in some parts. (3)

Detailed comments (Please justify your recommendation and suggest improvements in technical content or presentation.)

Specific research results need to included in the abstract.

Needs professional editing for academic styling, e.g. "For now..."
While obvious, the abbreviation of TKP, LZD, etc. is unnecessary in the text (OK for tables). Why not the fullname and then introduce the abbrev?

Cited source for table1 and table2? <-- put in caption
Are Alexa's "dailyTime" and "dailyVisist" value relevant to the paper? Reader will be wondering about its meaning. If not integrate table1 and table2 into one table (rank+rating)

#51 (1570488095): Comparative

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Non continous flow in fig1 (missing arrow?)

Inefficient use of space in fig3, fig5, fig7, etc <-- edit

"This research also combines several criteria derived from five different quality model software into one hierarchical model structure" <-- where is this presented (table/figure?). Instead of assessment result, focus on the combined model is a more worthy contribution for an academic paper.

Review 2

Relevance and timeliness	Technical content and scientific rigour	Novelty and originality	Quality of presentation
Average (3)	Marginal work and simple contribution. Some flaws. (2)	Some interesting ideas and results on a subject well investigated. (3)	Readable, but revision is needed in some parts. (3)

Detailed comments (Please justify your recommendation and suggest improvements in technical content or presentation.)

This research analyzes the results of ecommerce selection by using several software quality models that are implemented with the analytical hierarchy process. However, the research problem is not strong formulated. The introduction is too much with poor consistency between paragraphs. Please consider to simplify the content and make it concise. Authors shall consider the consistency and unity among paragraphs

How do the authors deal with the comparison models? Is there any specific criteria and competencies for the assessors in performing the assessments? What are the mechanism for conducting the assessments?

Review 3

Relevance and timeliness	Technical content and scientific rigour	Novelty and originality	Quality of presentation
Average (3)	Valid work but limited contribution. (3)	Some interesting ideas and results on a subject well investigated. (3)	Readable, but revision is needed in some parts. (3)

Detailed comments (Please justify your recommendation and suggest improvements in technical content or presentation.)

The manuscript is presented quite well and has a contribution to the scientific and practical fields, but some parts need to be improved to make the manuscript better, namely:
1. Problems that are the basis for conducting research have not been clearly stated
2. In the introductory section, the author states "transactions through e-commerce, especially in Indonesia, has increased by 500% in just 5 years". What references are used to corroborate the statement
3. The author should add citations to strengthen the statement "data collected by iPrice"
4. There are still words in Indonesian "kriteria" in table 3
5. This study seems to have not been fully completed, because there are no recommendations for the use of the results of the analysis, therefore the authors need to add further work to utilize the results of the analysis

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Specific research results need to included in the abstract.

Needs professional editing for academic styling, e.g. "For now,.."

While obvious, the abbreviation of TKP, LZD, etc. is unnecessary in the text (OK for tables). Why not the fullname and then introduce the abbrev?

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Hasil penelitian khusus perlu dimasukkan dalam abstrak.

Butuh pengeditan profesional untuk gaya akademis, mis. "Untuk sekarang,.."

Meskipun jelas, singkatan TKP, LZD, dll tidak diperlukan dalam teks (OK untuk tabel). Mengapa bukan nama lengkap dan kemudian memperkenalkan singkatan?

Sumber yang dikutip untuk table1 dan table2? <- masukkan dalam caption

Apakah nilai Alexa "dailyTime" dan "dailyVisist" relevan dengan kertas? Pembaca akan bertanya-tanya tentang maknanya. Jika tidak mengintegrasikan table1 dan table2 ke dalam satu tabel (peringkat + peringkat)

Aliran tak berkelanjutan di fig1 (tanda panah hilang?)

Penggunaan ruang yang tidak efisien di fig3, fig5, fig7, dll <- edit

"Penelitian ini juga menggabungkan beberapa kriteria yang berasal dari lima perangkat lunak model kualitas yang berbeda menjadi satu struktur model hirarkis" <- di mana ini disajikan (tabel / gambar?). Alih-alih hasil penilaian, fokus pada model gabungan adalah kontribusi yang lebih berharga untuk makalah akademis.

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Penelitian ini menganalisis hasil seleksi e-commerce dengan menggunakan beberapa model kualitas perangkat lunak yang diimplementasikan dengan proses hierarki analitik. Namun, masalah penelitian tidak dirumuskan kuat. Pengantar terlalu banyak dengan konsistensi yang buruk antar paragraf. Silakan mempertimbangkan untuk menyederhanakan konten dan membuatnya ringkas. Penulis harus mempertimbangkan konsistensi dan kesatuan antar paragraf

Bagaimana cara penulis menangani model perbandingan? Apakah ada kriteria dan kompetensi khusus untuk penilai dalam melakukan penilaian? Apa mekanisme untuk melakukan penilaian?

--- ---

Naskah disajikan cukup baik dan memiliki kontribusi ke bidang ilmiah dan praktis, tetapi beberapa bagian perlu ditingkatkan untuk membuat naskah lebih baik, yaitu:

1. Masalah yang menjadi dasar untuk melakukan penelitian belum dinyatakan secara jelas

2. Pada bagian pendahuluan, penulis menyatakan "transaksi melalui e-commerce, khususnya di Indonesia, telah meningkat 500% hanya dalam 5 tahun". Referensi apa yang digunakan untuk menguatkan pernyataan itu

3. Penulis harus menambahkan kutipan untuk memperkuat pernyataan "data yang dikumpulkan oleh iPrice"

4. Masih ada kata-kata dalam bahasa Indonesia "kriteria" dalam tabel 3

5. Studi ini tampaknya belum sepenuhnya selesai, karena tidak ada rekomendasi untuk penggunaan hasil analisis, oleh karena itu penulis perlu menambahkan pekerjaan lebih lanjut untuk memanfaatkan hasil analisis