



The Comparative Analysis of Business Applications for MSMEs based on Android (Case Study on Buku Kas and Buku Warung Applications)

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Abstract

The purpose of this research was to compare the Android-based MSME financial bookkeeping application based on the criteria for a quality accounting application. The used data collection were observation, questionnaires and literature study. The data analysis technique used was descriptive quantitative and comparative analysis. The results of the analysis of each application show that Buku Kas and Buku Warung applications have different completeness. The results of the analysis of the research show that in a comparative assessment by respondents from the questionnaire obtained the results that Buku Kas application get a total score of 2.845 while Buku Warung application get a total score of 2.764. The total score shows that 51% of respondents prefer Buku Kas application as an Android-based MSME financial bookkeeping application compared to Buku Warung application. The conclusion is that there is Buku Kas application has better criteria as an MSME financial bookkeeping application than Buku Warung application.

Keywords: Android, Buku Kas Application, Buku Warung Application, Financial Accounting Application, MSMEs

INTRODUCTION

MSMEs is an acronym for Micro, Small and Medium Enterprises. Based on Government Regulation of the Republik of Indonesia Number 7 of 2021, Government Regulation of the Republik of Indonesia Number 7 of 2021, MSMEs are productive businesses owned by individuals or independent business entities that are not branches of the company and meet certain criteria as referred to in on Government Regulation of the Republik of Indonesia Number 7 of 2021

Table 1. Criteria of MSMEs

No	Description	Business Capital Criteria	Annual Sales Criteria
1	Micro business	Maximum 1 Billion	Maximum 2 Billion
2	Small business	>1 Billion – 5 Billion	>2 Billion – 15 Billion
3	Medium Enterprise	>5 Billion – 10 Billion	>15 Billion – Billion

Source: Government Regulation of the Republik of Indonesia Number 7 of 2021

MSMEs have an important role and have been trusted by the government to be the spearhead of economic growth in Indonesia. This is because MSMEs have a large contribution to regional income or state revenue (Kholidah and Hakim, 2018) and have the potential to continue to be improved in encouraging national economic growth. Although the contribution of MSMEs is quite large to the national economy, MSMEs have a serious problem, namely the poor management of funds in carrying out their business activities. One way to manage funds is to do financial bookkeeping.

Bookkeeping is an important thing to do if the business that is being pioneered wants to grow quickly. Doing neat financial books can avoid the risk of loss and even bankruptcy. Financial bookkeeping can be regarded as an information center in a business. In bookkeeping, you can know the financial condition of both income and expenses, can develop strategies according to the budget you have, can find out how far the business or business that is being run is generating profits, besides that it can also recap transactions that have been carried out within a certain time or period. , knowing the position of payables and receivables and also serves as an important basic document for the purposes of tax calculations.

If you see these benefits, SMEs should be aware that bookkeeping is an important element for their company or business activities. Not doing bookkeeping causes some losses for businesses such as not knowing the convincing value of assets and debts owned, not knowing the real (real) amount of costs incurred, not being able to apply for business loans to banks because it is difficult to analyze whether or not business finances are healthy. This bookkeeping is very important to be used as the basis for making decisions in developing the business that we run.

However, many MSME actors have not kept their business financial records. Some MSMEs also record sales using a manual system, namely using a notebook whose function is to record the goods sold by only recording the number of sales. With a manual system, it is possible that there will be risks, one of which is the risk of lost or damaged documents. In addition, there is a perception that bookkeeping is too difficult if applied to their small businesses, there is no time to learn how to do bookkeeping because MSME actors think more about strategies to increase sales turnover and another perception is that MSME actors prioritize hereditary habits in running their business (Hani and Fauzi, 2017).

The development of information technology has a significant impact on financial records or bookkeeping. The more advanced technological developments provide convenience in recording financial transactions. Initially, data processing underwent a change from a manual system to a computer system. However, currently the software for recording company finances can not only be used on a computer, but can also be accessed via a smartphone. One of the operating systems on smartphones that is widely used today is the Android operating system. Various Android-based MSME financial bookkeeping applications also provide convenience in recording financial transactions and providing digital financial reports. These applications are Buku Kas, Buku Warung, Teman Bisnis, Catatan Keuangan Usaha- Toko Ku, Moodah-Catatan Keuangan Harian Usaha UMKM, Artaka- Pencatat Keuangan Usaha, Kasvlo (Catatan Keuangan Online) etc.

Currently, the use of applications or software is the right way to overcome MSME problems in terms of managing funds. Various Android-based MSME financial bookkeeping applications also provide convenience in recording financial transactions and providing digital financial reports. This bookkeeping application can record a simple transaction for individual businesses (micro businesses) and small businesses.

The applications used in this study are Cash Books and Warung Books. This application was chosen because it is widely used by students of Study Program Accounting Associate Degree

Politeknik Harapan Bersama carrying out Field Work Practices in local MSMEs as a means to assist MSMEs in recording their business finances. In addition, the application is also widely used by users, namely the general public in carrying out their business activities to be used as an application for recording their business finances. It is evident from the total downloads presented in the table below.

Table 2. Total Downloads of Financial Recording or Bookkeeping Applications

No	Application Name	Total Downloads
1	Buku Kas	> 1.000.000
2	Buku Warung	> 1.000.000
3	Teman Bisnis	> 100.000
4	Catatan Keuangan Usaha- Toko Ku	> 100.000
5	Moodah-Catatan Keuangan Harian Usaha UMKM	> 10.000
6	Kasvlo (Catatan Keuangan Online)	> 10.000
7	Artaka- Pencatat Keuangan Usaha	> 1.000

Sumber: google playstore

The large number of Android-based MSME financial bookkeeping applications that are available for free now require users, especially MSME actors, to be able to choose the best and most effective application for their business. So that the selected application will be useful to support MSME business activities and of course can minimize or even prevent MSMEs from the risk of loss or bankruptcy in carrying out their business activities and can provide information about the best applications to be used by MSMEs in recording their business finances so that they are expected to support MSMEs in carrying out their business or business activities.

THEORITICAL FRAMEWORK AND HYPOTHESIS

Business Application

Based on the Law of the Republic of Indonesia Number 16 of 2009, financial bookkeeping is "a recording process that is carried out regularly to collect financial data and information which includes assets, liabilities, capital, income and costs, as well as the total cost of acquisition and delivery of goods or services. , which is closed by compiling financial statements in the form of balance sheets and income statements for the period of the tax year". There are some simple bookkeeping that can be applied in MSME business activities in general, including: bookkeeping expenses, bookkeeping income, bookkeeping main cash, bookkeeping inventory stock, bookkeeping inventory and bookkeeping profit and loss (Maulida, 2019)

According to Nurhayati (2015:13) some of the benefits of bookkeeping include: recording in detail the business money owned, controlling expenses, analyzing sources of income, knowing the development of the business being managed, increasing investor confidence, planning cash flow , and knowing changes in company assets.

Android Application

According to Abdurahman and Riswaya (2014:62) an application is a ready-to-use program that is used to execute commands from the user of the application with the aim of getting results that are in accordance with the purpose of making the application. While *android* according to Setiawan and Ramdany (2019:2) is an operating system for the device *mobile* Linux based which initially developed by *Android* Inc. *Android* consists of an operating system , *middleware* and applications. Most of the apps can be found in the *Play Store* .

Criteria for Qualified Business Applications

Bookkeeping can't be separated from the science of accounting. So that in determining the financial application to be used in bookkeeping, we can consider several criteria for a quality accounting application program that must be considered. The criteria are as follows:

1. **Security**
security criteria include issues regarding system integrity and availability (Musa, 2005:100). The sub-indicators used are sign up, log in, back up and restore facilities (Kusumo, 2017:18)
2. **Availability**
According to Basile in Karte (2017:19) Availability is that an application is complete providing a standard accounting cycle and other features. The sub-indicators used according to (Kusumo, 2017:19) are input features and output features . Other sub indicators such as transaction features and business support features.
3. **Flexibility**
According to Hardono in Karte (2017:20) Flexibility shows the system in the program is easy to adapt according to user needs that are easy to change . The sub-indicators used are the minimum standard of installation and the ability to (Musa, 2005:89), *Multiuser Support* (Kusumo, 2017:21), Ease of Use (Karte, 2017:21).
4. **Easy of Use**
According to Wasti in Karte (2017:21) this criterion can be seen from the ease of use of the features offered by the program and the user friendly appearance of the program , so that users do not experience significant difficulties in operating it.
5. **Reliability**
According Hardono in Karte (2017:18) realibility shows how much the program can be counted on to do a process that can be trusted and needed . The sub indicators used are the audit trail and the use of digit numbers (Karte 2017:18), Data Integration (Kusumo, 2017:23).
6. **Cosistency**
The sub-indicators used are rounding numbers (Kusumo, 2017:23) and Currency Usage (Karte 2017:18).
7. **Report Quality**
The main purpose of bookkeeping is to provide accurate financial reports at the right time (Musa, 2005:95). The sub-indicators used are report availability (Kusumo, 2017:24), conformity (IAI, 2018:9), graphic facilities.
8. **Upgradability**
This criterion indicates whether the application program has an automatic system update facility on the application.
9. **Vendor Support**
This criterion shows how developer support to users after the sale period. These criteria include: High quality training . This criterion indicates whether the developer provides training features for users in running the MSME financial bookkeeping application program (Kusumo, 2017:25).

RESEARCH METHOD

Type of Data

The types of data used in this research are qualitative data and quantitative data. The qualitative data in this study comes from the author's observations regarding profiles, an overview of buku kas and buku warung applications, and the features of buku kas and buku

warung applications. Quantitative data in this study is the result of distributing questionnaires or online questionnaires via google form to respondents who have been in the form of scoring .

Population and sample

The population in this study were 374 students of Politeknik Harapan Bersama of the Accounting Study Program in semester 6 of the 6th semester. Meanwhile, the samples were 32 students. The sample was determined using a sampling technique with a non-probability sampling approach in the form of a purposive sampling method.

Data source

Sources of data in this study are primary data sources and secondary data. Primary data used in this study such as data collected from research results in the form of distributing questionnaires or online questionnaires via google form to respondents. Secondary data used in this study such as data on total downloads, ratings , ranking of MSME financial bookkeeping applications that are accessed through www.appbrain.com .

Data collecting technique

To obtain the data or information needed in this study, the data collection techniques used in this study were observation, questionnaires and literature study.

Data analysis technique

Data analysis is a process to process data that has been obtained in the field. To answer the problem formulation, this research uses quantitative and comparative descriptive analysis.

1. Quantitative Descriptive Analysis

The data that has been collected can be presented in the form of tables, graphs or pie charts which can then be analyzed and described.

2. Comparative Analysis

According to Agung (2012:58) comparative analysis is an analysis carried out by comparing one theory with another theory or the results of one study with the results of other research. In this study, the author will compare the total score obtained from the buku kas and buku warung applications questionnaire to find an Android -based MSME financial accounting application that is superior based on the criteria tested.

RESULT AND DISCUSSION

The Analysis of Strength and Weaknesses of Business Application

1. Security

In buku kas and buku warung applications, there is a process of sign up and log in using the OTP (One Time Password) code and can't log out automatically . Back up and restore data automatically provided by buku kas and buku warung applications. But on Buku warung application also provides Back up and restore manually.

2. Availability

Buku kas and buku warung applications provide input features such as a list of goods, a list of customers and a list of suppliers, as well as transaction features such as sales or income, an expense transaction feature, a payables and receivables transaction feature equipped with additional cost of goods and a printable digital invoice . But for Invoice digital on buku kas is available only on sales transactions while at buku warung application

provided invoices digitally for sales and expenditure. Buku kas application provide income statement, accounts payable reports and consumer reports (pdf or excel) while buku warung application only provides reports income / expenses, accounts payable and accounts receivable (pdf or excel) .and both provide several features such as digital business cards , bluetooth printers , digital payments with features to create an online shop for free and target sales. but buku warung application doesn't have a sales target feature.

3. Flexibility

In the standard buku kas application installation minimum android version 6.0 and ios minimum version 9.0 and invoice consist of business name, bank information, notes, business address and phone number . In the standard buku warung application installation minimum android version 5.0 and the invoice consists of a business name, business address and can upload a company logo. Both applications provide Multi User Support features.

4. Easy to use

Buku Kas and Buku Warung applications have a user-friendly appearance because there are help features and the application interface looks simple.

5. Reliability

Buku Kas and Buku Warung applications don't yet provide audit trail facilities that can't be deleted and there are digital payment facilities. The maximum number of digits is 1 trillion in buku kas application, while in Buku Warung application the number of digits is unlimited.

6. Consistency

Buku kas and buku warung applications are consistent in rounding numbers consistently and using the currency symbol, namely Rupiah.

7. Report Quality

Buku kas and buku warung applications don't provide financial reports such as income statements, balance reports, cash flow reports or notes to financial statements according to SAK EMKM but in buku kas application there are graphs of sales, expenses and profits.

8. Upgradability

Buku kas and buku warung Applications Active in system update.

9. Vendor Support

Buku kas and buku warung applications provides several facilities such as Usage guides, video tutorials, service experts or customer care .

The Comparative Analysis of Financial Accounting Applications for MSMEs based on Android

1. Security

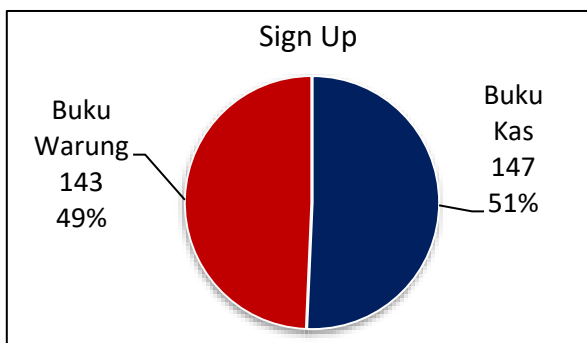


Figure 1. Percentage Comparative of Sign Up Feature Indicator

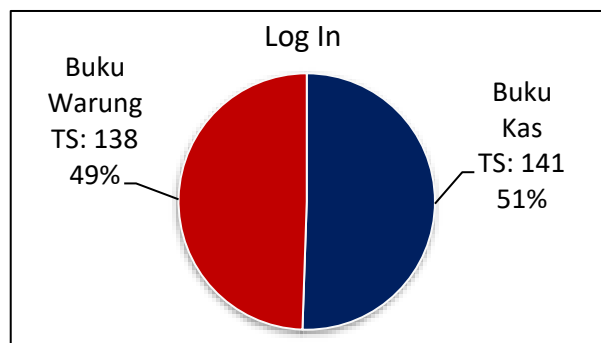


Figure 2. Percentage Comparative of Log in Feature Indicator

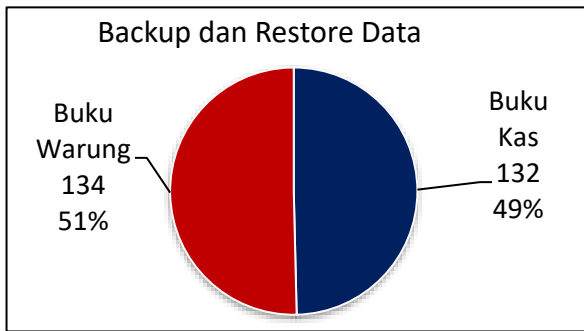


Figure 3. Percentage Comparative of Backup and Restore Feature Indicator

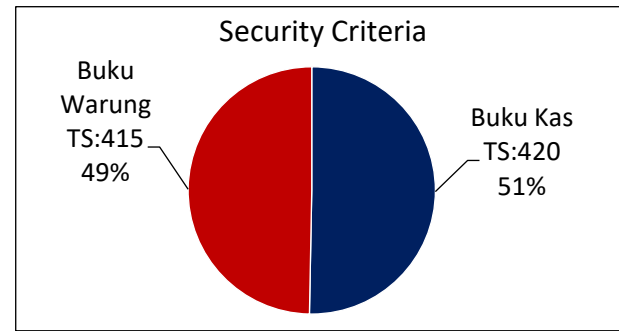


Figure 4. Percentage Comparative of security Criteria

Based on figure 4 , it can be seen that in buku kas application has a total score of 420 with a percentage of 51%, while Buku Warung application has a score of 415 with a percentage of 49%. With details, buku kas application obtained a superior score for the sign up feature (figure 1) and user login feature (figure 2), while the data backup and restore feature (figure 3) Buku Warung application received a superior score. So it can be concluded based on the assessment of 32 respondents that Buku Kas application is superior to Buku Warung application on security criteria .

2. Availability

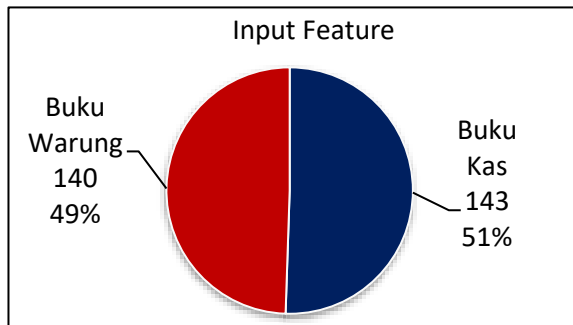


Figure 1. Percentage Comparative of Input Feature Indicator

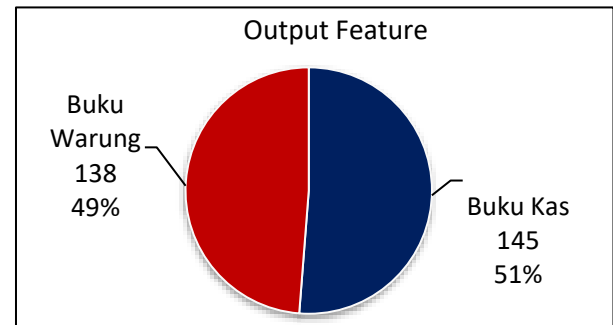


Figure 2. Percentage Comparative of Output Feature Indicator

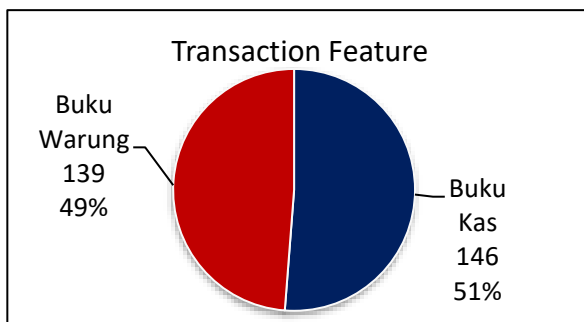


Figure 4. Percentage Comparative of Transaction Feature Indicator

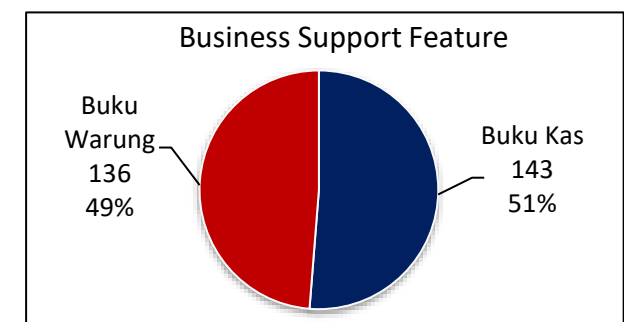


Figure 3. Percentage Comparative of Business Support Featur Indicator

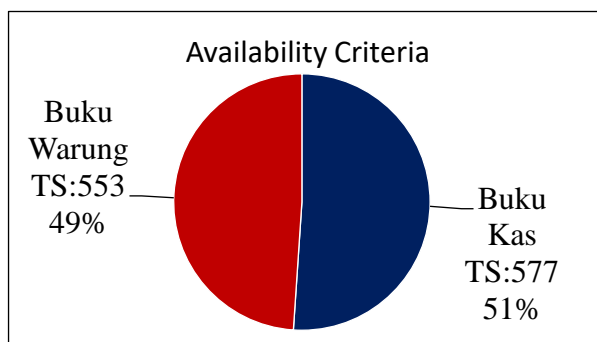


Figure 5. Percentage Comparative of Availability Criteria

Based on figure 9, it can be seen that in buku kas application a score of 577 with a percentage of 51% was obtained, while Buku Warung application a score of 553 with a percentage of 49%. With details on Buku Kas application, it gets a superior score on all indicators of availability criteria such as input feature (figure 5) , output feature (figure 6) , transaction feature (figure 7) and business support feature (figure 8) . So it can be concluded based on the assessment of 32 respondents that Buku Kas application is superior to Buku Warung application on the availability criteria .

3. Flexibility

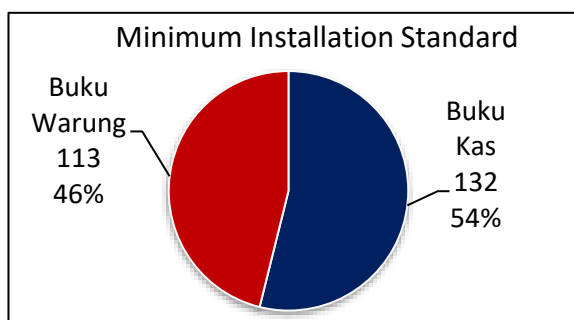


Figure 6. Percentage Comparative of Minimum Installation Standard Indicator

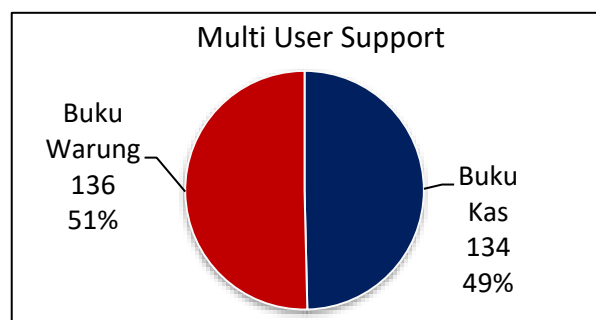


Figure 7. Percentage Comparative of Multi User Support Indicator

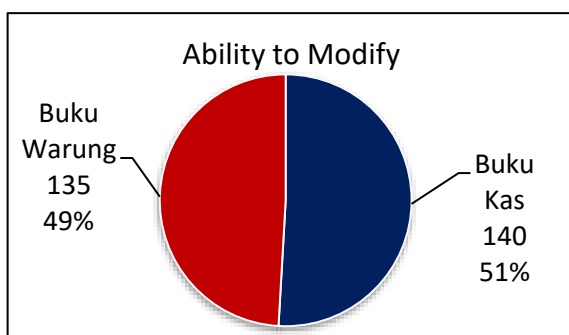


Figure 9. Percentage Comparative of Ability to Modify Indicator

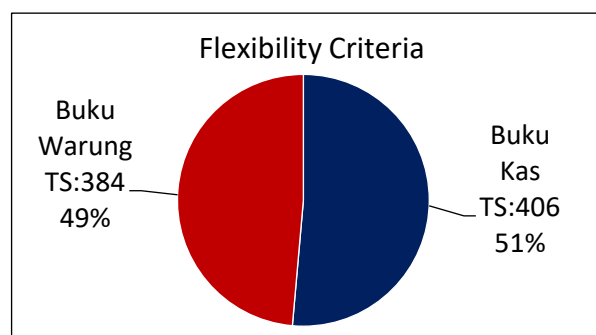


Figure 8. Percentage Comparative of Flexibility Criteria

Based on figure 13, it can be seen that in Buku Kas application a score of 406 with a percentage of 51% was obtained, while in Buku Warung application a score of 384 with a percentage of 49% was obtained. With details, Buku Kas application obtained a superior score on all indicators of the flexibility criteria, namely minimum installation standards

(figure 10) , multi user support (figure 11) and ability to modify (figure 12) . So it can be concluded based on the assessment of 32 respondents that Buku Kas application is superior to Buku Warung application on the Flexibility criteria .

4. Easy of Use

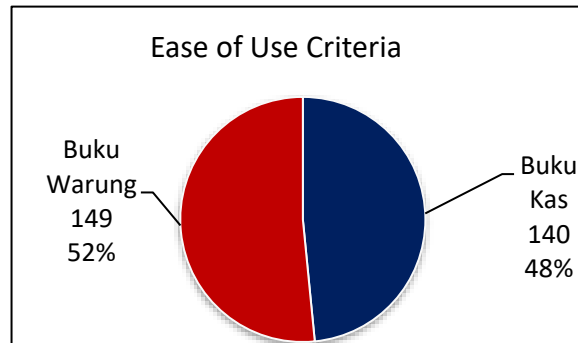


Figure 10. Percentage Comparative of Easy of Use Criteria

Based on figure 14, it can be seen that in Buku Kas application a score of 140 with a percentage of 48% was obtained, while in Buku Warung application a score of 149 with a percentage of 52%. So it can be concluded based on the assessment of 32 respondents that Buku Warung application is superior to Buku Kas application on the criteria of ease of use with user friendly indicator.

5. Reliability

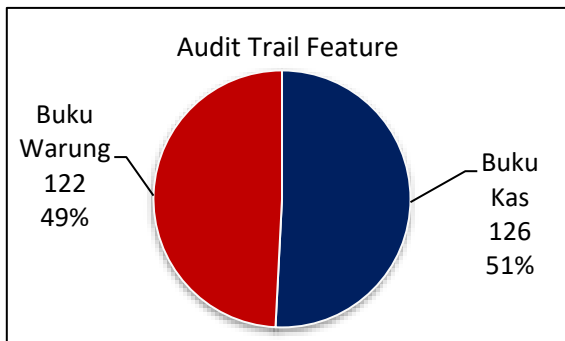


Figure 11. Percentage Comparative of Audit Trail Feature Indicator

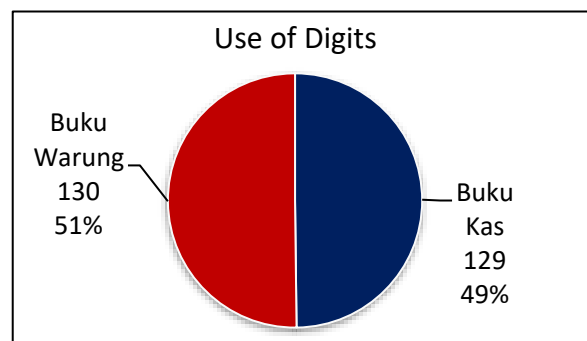


Figure 12. Percentage Comparative of Use of Digits Indicator

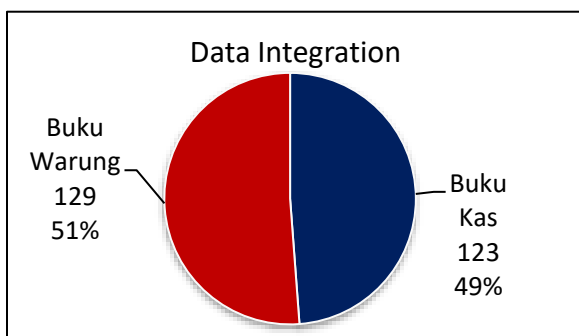


Figure 14. Percentage Comparative of Data Integration Indicator

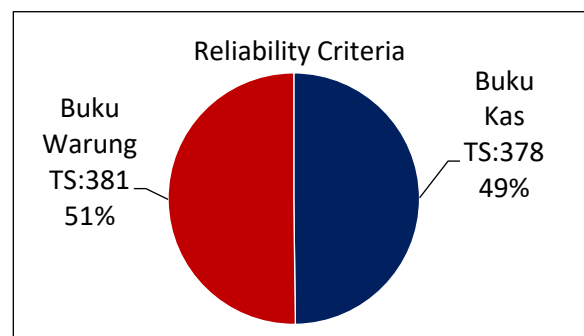


Figure 13. Percentage Comparative of Reliability Criteria

Based on figure 18, it can be seen that in Buku Kas application a score of 378 with a percentage of 49% was obtained, while in Buku Warung application a score of 381 with a percentage of 51% was obtained. With details, Buku Kas application gets a superior score on the audit trail feature (figure 15) while Buku Warung application gets a superior score on the indicators of digit use (figure 16) and data integration (figure 17) . So it can be concluded based on the assessment of 32 respondents that Buku Warung application is superior to Buku Kas application on the reliability criteria.

6. Consistency

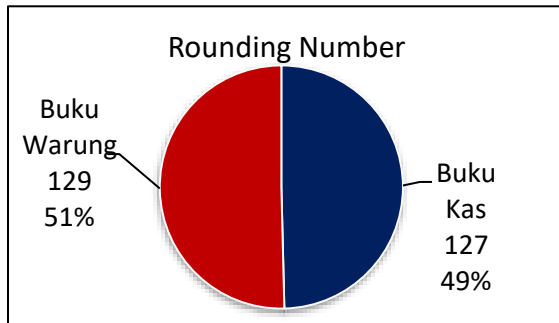


Figure 16. Percentage Comparative of Rounding Number Indicator

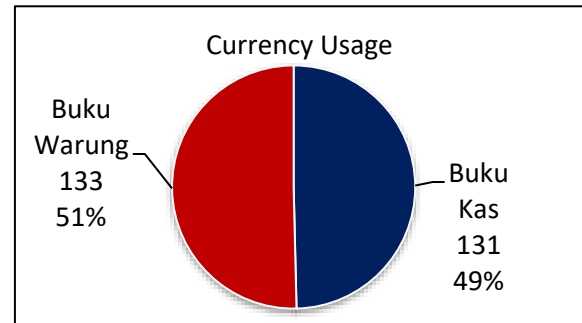


Figure 15. Percentage Comparative of Currency Usage Indicator

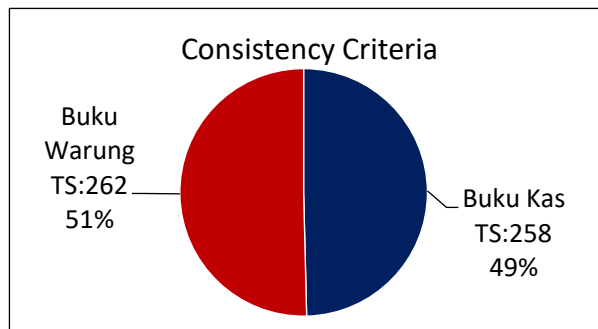


Figure 17. Percentage Comparative of Consistency Criteria

Based on figure 21, it can be seen that in Buku Kas application a score of 258 with a percentage of 49% is obtained, while in Buku Warung application a score of 262 with a percentage of 51%. With details, Buku Warung application has a higher score on the rounding number feature (figure 19) and currency usage (figure 20) . So it can be concluded based on the assessment of 32 respondents that Buku Warung application is superior to Buku Kas application on the consistency criteria.

7. Report Quality Criteria

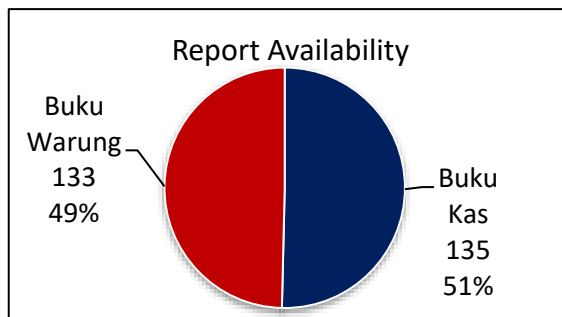


Figure 19. Percentage Comparative of Report Availability Indicator

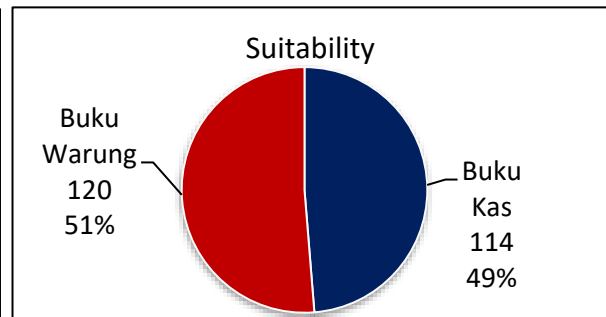


Figure 18. Percentage Comparative of Suitability Indicator

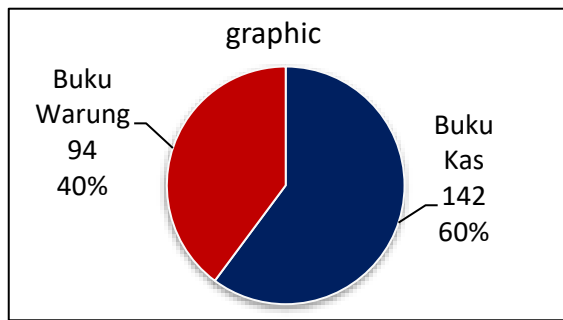


Figure 21. Percentage Comparative of Graphic Feature Indicator

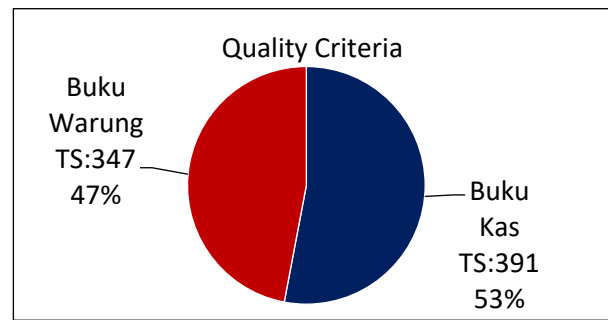


Figure 20. Percentage Comparative of Quality Criteria

Based on figure 25, it can be seen that in Buku Kas application a score of 391 with a percentage of 53% was obtained, while in Buku Warung application a score of 347 with a percentage of 47%. With details, Buku Kas application gets a higher score on the report availability indicator (figure 22) and graphic facilities (figure 24) while Buku Warung application gets a higher score on the suitability indicator (figure 23). So it can be concluded based on the assessment of 32 respondents that Buku Ka application is superior to Buku Warung application on the report quality criteria.

8. Upgradability

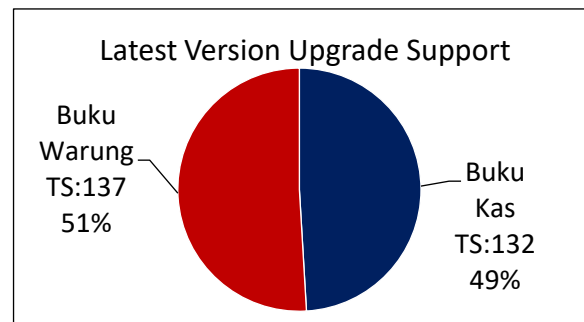


Figure 22. Percentage Comparative of Upgradability Criteria

Based on figure 26, it can be seen that in Buku Kas application a score of 132 with a percentage of 49% is obtained, while Buku Warung application a score of 137 with a percentage of 51%. So it can be concluded based on the assessment of 32 respondents that Buku Warung application is superior to Buku Kas application on the upgradability criteria with indicators of support for the latest version upgrade.

9. Vendor Support

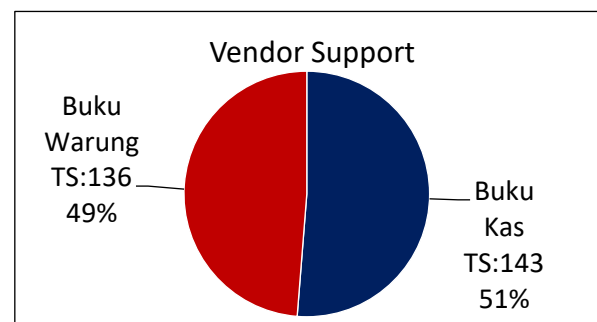


Figure 23. Percentage Comparative of Vendor Support Criteria

Based on Figure 27, it can be seen that Buku Kas application a score of 143 with a percentage of 51% was obtained, while in Buku Warung application a score of 136 with a percentage of 49%. So it can be concluded based on the assessment of 32 respondents that Buku Kas application is superior to Buku Warung application on the vendor support criteria.

After presenting the scores from each application in detail for each criterion and assessment indicator, the following authors present the results of a comparison of each application as a whole to determine which application is the best among the two Android-based MSME bookkeeping applications that have been studied.

Conclusion

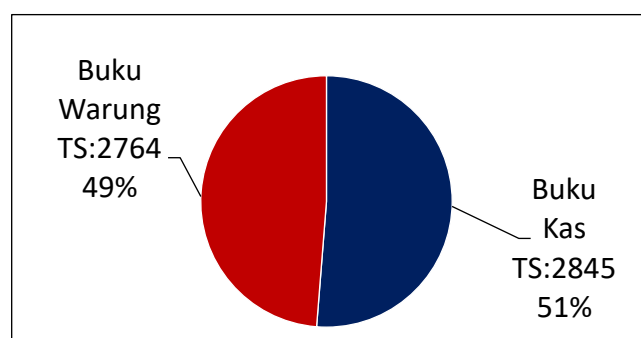


Figure 24. Percentage Compaative of Appraisals for Buku Kas and Buku Warung

Based on the assessment of figure 28 which has been presented above, it can be done an analysis of 32 respondents who have given their assessment using 9 criteria with 21 indicators showing a score of 2,845 with a percentage of 51% of respondents who mostly give their assessment of Buku Kas application, while the score is as much as 2,764 with a percentage of 49% of respondents gave their assessment of Buku Warung application. The results obtained allow respondents to prefer Buku Kas application as an MSME financial bookkeeping application compared to Buku Warung application because Buku Kas application provides more complete features than Buku Warung application.

CONCLUSIONS

Based on the results of the analysis of each application, namely Buku Kas and Buku warung applications, they have different completeness. Buku Kas application has graphic facilities and sales targets that Buku Warung application doesn't have, while Buku Warung application has a manual Back Up facility that Buku Kas application doesn't have. The disadvantages of the two applications are based on the criteria for a quality accounting application, among others, they can't log out automatically so that they allow users to log in without re-verification, do not have an audit trail facility that cannot be deleted and also have not been able to make financial reports according to SAK EMKM.

Based on the results of research on Comparative Analysis of Financial Bookeeping Applications for MSMEs based on Android (Case Study on Buku Kas and Buku Warung Applications). it can be concluded that Buku Kas application has better criteria as an MSME financial bookkeeping application compared to Buku Warung application. This is evidenced by the assessment of 32 respondents using 9 criteria with 21 indicators that obtained results, namely Buku Kas application got a total score of 2,845 while Buku Warung application got a total

score of 2764. The total score shows that 51% of respondents prefer Buku Kas application over Buku Warung application.

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