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## STUDENT' PERCEPTIONS OF SPREADSHEET – BASED ACCOUNTING APPLICATION WITH TRANSACTION CYCLES APPROACH

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### Abstract

The purpose of this study are to describe the advantages of spreadsheets - based accounting application with transaction cycles approach, and find out the students' perceptions of the feasibility of spreadsheets - based accounting application with transaction cycles approach. This study evaluates the feasibility of spreadsheets-based accounting application with transaction cycles approach for basic accounting practice. Data obtained consisted of quantitative and qualitative data. Qualitative data include of the comments and suggestions contained in the questionnaire. Instruments used in this evaluation is the student perceptions questionnaire. The instrument uses 4 Likert scale, from 1 (very poor) to 4 (excellent). The feasibility of application includes the technical and operational aspects. The technical aspects measure the ability of hardware and operating system to respond the accounting application, simplicity and ease of use. Operational aspects relates the ability of users using accounting application, the ability of accounting application to produce information, and control applications of the accounting application. The qualitative data were have analyzed descriptively. Quantitative data were analyzed by using percentage analysis by comparing the number of answers within one (1) item by the number of ideal answer within one (1) item. **The results of this research are:** 1) Spreadsheet-based accounting application with transaction cycle approach provides ease of use, variety of reports, as well as ease when moving to a complex computer accounting program. 2) Spreadsheet-based basic accounting practice with transaction cycle approach is fisible from the technical aspects (88,12%) and operational aspects (87,86%).

Keywords: accounting application, transaction cycle, spreadsheet

### INTRODUCTION

An information system is a set of interrelated subsystems that work together to collect, process, and store, transform, and distribute information for planning, decisions making and control. **The heart of every company's accounting informations system is its accounting software.** Accounting software is an application that records and processes accounting transactions within functional modules such as accounts payable, accounts receivable, payroll, and trial balance. **The use of accounting software can improve the efficiency of information collection, processing, storing, transformation, and distribution** (Scot, 2014), (Lim, 2013).

While many company are abandoning spreadsheets for financial accounting software, some hold onto the application. **Spreadsheets remains entrenched in business processes, largely because it has been a part of the enterprise for so long.** Its used as accounting software or only supplement of inadequate accounting software. As accounting software, its used to to collect, process, and store, transform, and distribute accounting information. **As supplement of accounting software, its used with other tools for efficient financial processes** (Minnock, 2006). Advantages of use spreadsheet is easy to use, manage data easily, changes and edits can entered quickly (Chaamwe and Shumba, 2016).

Prior spreadsheet-based accounting application use journal approach. At the journal approach, the transactions recorded in journals (general journal and special journals). Further automation is posting in the ledger, the process of the work sheet, financial statement and a closing balance sheet. Users must understand about the journal function and how to record in a journal. The downside of this approach is the lack of integrity of the data, duplication of data entry, lack of audit controls, chenges can easily be made, take a great deal of time produce, and lack of scurity. Another limitation is the recording of the journal is relatively difficult, and the lack of the types of reports that can be generated (Minnock, 2006), (Baskarada, 2011).

The development of spreadsheet-based accounting application with transaction cycle approach is intended to optimize the capabilities of spreadsheet in accounting data processing. Accounting application is expected to be used in learning of basic accounting practices as well as in actual practice in small and medium enterprises. This application allows users in recording financial transactions, making the financial statements are more diverse, and makes it easier when switching to more complex accounting software (Ariana, 2015).

Feasibility of spreadsheet-based accounting application with transaction cycle approach for learning basic accounting practices need to be evaluated. Feasibility is determined based on the application of technical feasibility and operational feasibility (Davis, 2002). The technical feasibility include the capabilities of hardware and operating system to respond the accounting application, simplicity and ease of use. Operational feasibility include the user's ability to use

accounting application, the ability of accounting application to produce information, and control applications on the accounting application (Ariana, 2015).

This Study focus on spreadsheets - based accounting application with transaction cycles approach for basic accounting practice. This study aimed to describe the advantages of spreadsheets - based accounting application with transaction cycles approach, and find out students' perceptions of the feasibility of spreadsheets - based accounting application with transaction cycles approach.

#### METHODOLOGY

This study is an evaluative study that evaluate the feasibility of spreadsheets-based accounting application with transaction cycles approach for basic accounting practice. Data obtained in this study is quantitative and qualitative data. Qualitative data consists of the comments and suggestions contained in the questionnaire. Instruments used in this evaluation is the student perceptions questionnaire. The instrument uses 4 Likert scale, from 1 (very poor) to 4 (excellent). The feasibility of application include the technical and operational aspects. The technical aspects include the ability of hardware and operating system to respond the accounting application, simplicity and ease of use. Operational aspects include the ability of users using accounting application, the ability of accounting application to produce information, and control applications on the accounting application. The qualitative data were analyzed with descriptive qualitative analysis technique that describe the results of student perceptions. Quantitative data were analyzed by using percentage analysis by comparing the number of answers within one (1) item by the number of ideal answer within one (1) item. Conclusion known by comparing the percentage of votes with a percentage scale that can be seen in Table- 1.

Table- 1. Level of Feasibility

Range of Values	Level of Feasibility
82,3 – 95	Very decent, do not need to be revised
69,7 – 82,3	Decent, do not need to be revised
44,3 – 69,7	Decent enough, needs to be revised
31,7 – 44,3	Less worthy, need to be revised
19,0 – 31,7	Very less worthy, so need to be revised

Source: BSNP, 2009

#### RESULT AND DISCUSSION

##### Spreadsheet-Based Accounting application With Transaction Cycles Approach

In large companies, the transaction was recorded in the revenue cycle, expense cycle, the production cycle and financial cycle. The results of the four-cycle process will be processed further in the cycle of financial reporting (Samryn, 2012). The use of a transaction cycle approach or accounting cycle approach is more consistent with the database in an accounting system than accounts of financial statement approach. Transaction cycle consists of the revenue cycle, purchase cycle, payroll cycle, the production cycle and financial cycle (Perry and Scheneider, 2005). Similarly, in case of an audit of financial statements, the audit carried out on the revenue cycle, expense cycle, the production cycle and financial cycle (Rama, and Jones, 2006). The revenue cycle includes activities related to the receipt of orders, delivery of goods, and cash receipts. Buying cycle includes activities related to purchase orders, goods receipts, and payments for purchases. Payroll cycle include activity to calculate the gross payment, reduction and net payments to employees. The production cycle includes the activities associated with the processing of raw materials, labor into finished goods (Perry and Scheneider, 2005).

Spreadsheets-based accounting application with transaction cycles approach can be used for the accounting cycle for the company. It consists of: 1) The initial data which includes company information, accounts, vendors, customers, inventory, 2) the cycle of transactions, including the purchase cycle, sales cycle and cash cycle, 3) journals covering special journals (purchasing, sales, cash receipts, cash disbursements ), and general journals, 4) ledger and sub-ledger that includes general ledger and sub-ledger of debt, receivables, and inventory, 5) trial balance, and the work sheet, 6) financial statements, including income statement and other comprehensive income, statement of financial position, statement of changes in equity and cash flow statement, 7) closing trial balance.

Spreadsheets-based accounting application with transaction cycles is different to the application made by the accounts or journal approach. Transaction cycle approach is expected to address some of the shortcomings in the accounting application-based spreadsheet with the accounts or journal approaches. For more details, the following will be explained about the facilities on spreadsheet-based accounting application with transaction cycle approach.

Initial data input includes company information, accounts, vendors, customers, inventory. This initial data input can be done manually or imported from other appropriate file. On application by the journal approach in general, these early data are not inputted to the full (Pujiati. 2007). In this application, the initial data inputted more complete as the accounting application package, to make it easier in case of transfer to a more complex application package. On the input information of the company added a choice of languages, namely Indonesia and English. The choice of language is to allow users to present financial statements in Indonesian or English.

Transaction cycle includes the purchase cycle, sales cycle and cash cycle. The purchase cycle is used to record purchases, purchase returns, purchases discount, and cash disbursements to pay the debt. The sales cycle is used to record sales transactions, sales returns, sales discounts, and cash receipts of accounts receivable. Cash cycle is used to record cash transactions of transactions other than cash receipts from the payment of receivables arising from sales on credit, and cash disbursements for the payment of debts arising from purchases on credit. With the transaction cycle approach, input transaction data in accordance with each cycle.

Journal covering special journals (purchasing, sales, cash receipts, cash disbursements), and general journal. In the journal approach, transaction data is recorded in the purchasing, sales, cash receipts, cash disbursements journal or general journal (Triandi and Stephanie, 2010). At the transaction cycle approach, journal purchasing, sales, cash receipts and cash disbursements is the result of input data on the transaction cycle. Input data is only carried out transactions in the general journal.

Ledger and sub-ledger that includes general ledger and sub ledger of debt, accounts receivable, and inventory. At the approach of the journal or on a transaction cycle approach, general ledger and sub-ledger automatically generated. At the approach of the transaction cycle, the ledger can be produced in more detail as the data is collected at each cycle.

Trial balance, balance sheet, and the work sheet is a facility to facilitate in making the financial statements (Sugiarta, 2008). At the approach of the journal or on a transaction cycle approach, trial balance, balance sheet, and the work sheet is the result of the automation of application

The financial statements, including the statements of income and other comprehensive income, statement of financial position, statement of changes in equity and cash flow statement (IAI, 2015). In a spreadsheet-based accounting application with this transaction cycle approach, tailored to the financial statements of financial accounting standards. Subsequently made closing trial balance is the result of automation that has been done.

Based on the description of the spreadsheets-based accounting application with transaction cycles approach, it can be seen the difference in cycle approach transactions with other approaches, such as: 1) more detail of initial data input, 2) input of transactions are made on the transaction cycle form and not on the journal form, 3) more quickly and complete process, 4) better of output quantity and quality.

#### Student Perceptions of Spreadsheet-Based Accounting application

Spreadsheets-based accounting application can be applied to the student's knowledge (Abbaspour and Valipour, 2016). Spreadsheets-based accounting application with transaction cycles approach can be applied for basic accounting practice. Feasibility spreadsheets-based accounting application with cycles transaction approach is necessary to evaluate.

Assessment components of accounting application covers the technical and operational aspects (Davis, 2002). The technical aspects include the ability of hardware and operating system respond to the accounting application, simplicity and ease of use. Assessment results of technical aspects can be seen in Table- 2. Operational aspects include the ability of users using accounting application, The ability of accounting application to produce information, and control applications on the accounting application. Assessment results of operational aspects can be seen in table- 3.

Table- 2. Assesment of Technical Aspects

No.	Technical Aspects	Mean Score (%)	Rating
Ability of hardware and operating system			
1	CPU (Central Processing Unit) can respond to all requests quickly.	89,81%	very worthy
2	The operating system supports accounting application used.	87,96%	very worthy
Simplicity and ease of use			
3	Accounting application is easy to learn.	90,74%	very worthy
4	Accounting application is easy to use.	92,59%	very worthy
5	Accounting application provide the dialog guidance that directs the user during data entry.	81,48%	very worthy
6	Structure of menu, facilitate users accounting application.	86,11%	very worthy
	Average	88,12%	very worthy

According to the table-2, it can be seen that the spreadsheets-based accounting application with the transaction cycle approach is very feasible to use. The ability of the hardware and the operating system is very capable of supporting applications. This application is very worthy to use because of its simplicity and ease of use.

Ability hardware and operating system can be seen from the ability of CPU (Central Processing Unit) to respond all requests quickly, The ability of operating system to supports accounting application used. Simplicity and Ease of usage can be seen from accounting application is easy to learn, accounting application is easy to use, accounting application provide the dialog guidance that directs the user during data entry, structure of menu, facilitate users accounting application

Based on Table- 3, it can be seen that the spreadsheets-based accounting application with the transaction cycle approach is very feasible to use. This application is very worthy to use because of the user's ability to use accounting application, the ability of accounting application to produce information, and control applications.

The ability to use accounting application can be seen from users can quickly use accounting application and users can overcome its own difficulties in the use of accounting application. The ability of accounting application to produce information can be seen from the ability of accounting application can produce financial reports, accounting application to generate detailed information, accounting application can generate information that can be displayed on the monitor, and accounting application can produce information in the form of paper documentation (print). Control applications can be seen from the adequate password of applications, application has a control (validation test, a test of accuracy, fairness, completeness etc.), application has a control output (output reconciled with other parts).

Table-3. Assesment of Operasional Aspects

No.	Operational Aspects	Mean Score (%)	Rating
The user's ability to use accounting application			
1	Users can quickly use accounting application.	91,67%	very worthy
2	Users can overcome its own difficulties in the use of accounting application.	87,04%	very worthy
Ability of accounting application to produce information			
3	Accounting application can produce financial reports.	93,52%	very worthy
4	Accounting application to generate detailed information.	79,63%	Worthy
5	Accounting application can generate information that can be displayed on the monitor.	98,15%	very worthy
6	Accounting application can produce information in the form of paper documentation (print).	93,52%	very worthy
Application Control			
7	Applications include adequate password.	76,85%	Worthy
8	Application has a control (validation test, a test of accuracy, fairness, completeness etc.).	87,04%	very worthy
9	Application has a control output (output reconciled with other parts).	83,33%	very worthy
	Rata-rata	87,86%	very worthy

## CONCLUSION

Spreadsheets-based accounting application with transaction cycles approach is the application to handle the company's accounting cycle. The advantages of spreadsheets-based accounting application with transaction cycles approach than the approach of the journal include: input the initial data is more detail, the input transactions are made on the form cycle of the transaction and not on the form of journals, the process is more rapid and complete, the quantity and quality of output produced is better, Spreadsheet-based basic accounting practice with transaction cycle approach is fisible from the technical aspects (88.12%) and operational aspects (87.86%).

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