

# DEVELOPMENT OF ASSESSMENT RUBRIC PERFORMANCE OF COMPETENCY MANAGING RECEIVABLE CARDS IN VOCATIONAL SECONDARY SCHOOL STUDENTS

Suwarno<sup>1</sup>

<sup>1</sup>Universitas PGRI Ronggolawe Tuban, Indonesia

## ABSTRACT

The expected result of this research is a valid and reliable performance assessment rubric for managing receivables cards. The stages carried out consist of: initial stage; design; trials; and implementation. Twelve teachers who taught accounting were selected as raters and previously explained how to use rubrics. Content validity analysis uses the Aiken index and reliability uses the inter-class correlation coefficient. The calculation results obtained are in the table, so they are valid. The alpha coefficient estimate is classified as special, and the analysis of the inter-class correlation coefficient provides an illustration that the rubric in question is reliable.

Keywords: Development, Rubric, Receivables Card

## 1. INTRODUCTION

One of the core competencies of teachers is carrying out assessment and evaluation of teaching and learning activities which is described in seven competencies, namely: (1) understanding the principles of assessment and evaluation of teaching and learning activities, (2) making provisions for important aspects for assessment and evaluation, (3) making procedures for assessing and evaluating teaching and learning activities, (4) developing tools for assessing and evaluating teaching and learning activities, (5) making administration of activities to assess and evaluate teaching and learning activities on an ongoing basis (6) making analysis of the results of assessing and evaluating teaching and learning activities, and (7) evaluating teaching and learning activities.

Teachers have to deal with many students and teaching schedules, making it difficult for them to provide useful feedback (Wang, 2008: p.449). The positive effect is providing feedback. The feedback that students receive during assessment can help them carry out self-assessment, reflection, increase their motivation and self-esteem (Marriott, 2009, p.239). With meaningful feedback, students can improve their weaknesses in learning, thinking, transfer learning, and learn to respect each other (Wang, 2007, p.175). From this feedback, the teacher will know the success of the teaching and learning process that has been carried out; competency and level of absorption; and valuable information as feedback for teachers in improving teaching and learning process activities.

Existing conditions, most teachers do not understand assessment to manage the class appropriately (Mertler, 2001, p.3). The main reason why teachers do not understand assessment lies in the teacher education program (Stiggins, 2002, p.762). Teachers learn the concepts and practices of educational assessment in just a few sessions (Popham, 2009, p.5). For this reason, teachers must understand that assessments refer to student competencies.

Performance assessment is an organized description containing strengths and weaknesses related to independent and joint tasks (Casio, 1992, p.267). Performance assessment is



basically a key factor in developing students effectively and efficiently. Performance assessment is very

useful for the overall dynamics of student growth, through this assessment the actual conditions of how students are performing can be known. So performance assessment is a process used by institutions to evaluate individual student work performance.

There are two special characteristics in performance assessment, namely (1) students are asked to demonstrate their ability to create a product or be involved in an activity, and (2) the product of the performance assessment is more important than their performance. In terms of choosing, whether what will be assessed is a product or performance (action) depends on the characteristics of the domain being measured

"A rubric is a text that contains agreed signs of value." (Callison, 2000, p.36). Bresciani, Zelna, & Anderson (2004) emphasize that a rubric is "creating core criteria that students can use in developing, revising, and assess their own work" Rubrics provide "detailed descriptions of what was learned and what was not". This descriptive data can be used to document how to improve instruction in learning. Furthermore, assessment rubric data is so detailed and well defined (Bresciani, et. al. 2004, p.30). A rubric is an assessment guide that describes the criteria used in assessing student work.

Because rubrics are easy to use and easy to explain, they produce data that is easy to understand and informative (Andrade, 2000, p.14). The level of detail found in a rubric helps increase validity (Popham, 2003, p. 95). Grading rubrics are "more likely to be fairly objective and consistent from lesson to lesson and from student to student, especially useful in team teaching situations that involve collaboration between teachers." (Callison, 2000, p.35). The rubric will provide a clear description of student performance that is directly related to learning activities and produces accurate and meaningful information in making decisions.

Rubrics can be holistic, analytical, or a combination of both (Luft, 1999, pp.107-121). A holistic rubric is a construct that contains various levels of performance that describe task quality, task quantity, or both, namely task quantity and quality. This type of rubric requires the teacher to determine the level of performance.

Meanwhile, an analytical rubric is a building that contains provisions at various levels of performance. Typically, each row begins with a cell stating the criteria to be assessed and each cell describes a different criterion level of performance. To increase the clarity of an analytical rubric, each criteria topic can be subdivided into shorter statements, and then followed by a description of the associated performance.

The main problem in this research is: How to develop a valid and reliable rubric for assessing competency in managing receivables cards for vocational school accounting competency students in the field of business and management skills? More operationally, as follows: (1) What skills describe the level of competency in managing accounts receivable cards among vocational school accounting competency students in the field of business and management expertise? (2) What is the valid rubric for assessing competency performance in managing accounts receivable cards among vocational school accounting competency students in the field of business and management expertise? (3) How is the rubric for assessing competency performance in managing accounts receivable cards for vocational school accounting competency students in the field of business and management skills reliable?

## **2. RESEARCH METHODS**

The aim of this research is to produce a performance assessment rubric for competency in managing receivable cards. The reason refers to Borg & Gall, 1983, that "research and development is a strategy." Research & development is a powerful strategy for improving practice.

This is the process used to develop and validate educational products.” This opinion strengthens the reason that this research method is in accordance with the objectives of the research to be carried out.

### **2.1. Stages of developing**

The researcher simplified it into 4 stages of developing a performance assessment rubric for managing receivable cards, namely the initial stage, design, trial and implementation.

#### **2.1.1. Early stage**

At this stage, activities are carried out (a) literature study to prepare for field data collection, (b) data analysis resulting from preliminary studies and describing the existing reality, followed by collecting supporting data related to concepts and theories relating to the development of a competency assessment rubric for managing receivable cards. These materials include assessment concepts, rubrics, SNP, KTSP, SKN, SKKNI, DU/DI demands. The results of this stage of the study were used to create an instrument for implementing a preliminary study regarding the implementation of activities to assess the competence of managing receivable cards among vocational school students.

The researcher then conducted a preliminary study at 2 accounting skills competency vocational schools using a survey method to obtain data, by interviewing and examining documents.

The data collected includes the vocational school's productive accounting skills competency program curriculum, the process of adapting the content of the productive curriculum to the demands of DU/DI, the implementation of an evaluation system and the availability of supporting infrastructure for assessment, and other data needed in this research.

#### **2.1.2. Design Stage**

The main parts taken into consideration by researchers in preparing the initial draft for developing a rubric for assessing accounting competency performance include a) how to design the competency performance assessment for managing receivables cards which is currently being implemented, b) the factors that support and inhibit the implementation of competency performance assessment. managing receivable cards.

Based on data from the preliminary study, researchers developed a rubric used to assess competency in managing receivable cards. Guided by a curriculum that refers to results, the assessment rubric developed is validated by experts, accounting education practitioners, heads of competency expertise and accounting subject teachers.

#### **2.1.3. Trials**

At this stage, a trial is carried out with the aim of finding out to what extent the assessment rubric can be applied to assess the performance of competence in managing receivable cards. Then an analysis is carried out to find out whether the assessment rubric has met its validity and reliability. If the validity and reliability do not meet the requirements, revisions and trials are carried out again until the validity and reliability requirements are met.

#### **2.1.4. Implementation Stage**

At this stage, the performance assessment rubric and the tools that have been tested are implemented so that the results can be known. If the results still contain deficiencies, improvements are made. The product of all this is a performance assessment rubric for competency in managing receivable cards.

## **2.2. Product Trial Design**

### **2.2.1. Limited Trial**

At this trial stage, the researcher together with the practical teacher carried out an assessment using a rubric. Simultaneously following the assessment process, this instrument is applied and revised according to field conditions. Thus, after a limited trial process and analysis and consultation with experts, a draft rubric for assessing performance in managing receivable cards can be obtained which is ready to be used for expanded trials. In this limited trial, the rubric and tools were applied to 6 (six) teachers (raters) and each teacher assessed 5 accounting competency performance results.

### **2.2.2. Expanded Trial**

The next stage of this research is an expanded trial. This is to determine whether the product you want to produce meets its performance objectives, the design is in the form of an experiment.

In this expanded trial, the rubric and its tools were applied to 12 (twelve) teachers (raters) who taught accounting and each assessed 5 students' work.

## **2.3. Test Subjects**

The research subjects in the study were teachers in the business and management vocational school accounting skills program. For limited trial subjects, 6 teachers (raters) were selected. Meanwhile, the subjects for the trial were expanded, 12 (twelve) teachers (raters) were selected. All teachers (raters) who were used as research subjects were given an explanation by the researcher about the use of the assessment rubric.

## **2.4. Data collection technique**

The techniques used are observation, validation sheets, and assessment sheets. Observations were carried out at the beginning to obtain physical evidence of competency performance assessments for managing receivable cards made and used by teachers, assessment of competency performance assessments for managing teacher receivable cards, and ongoing competency performance activities for managing receivable cards. Observations were made on two teachers who carried out lessons on inventory card management.

The validation sheet consists of a validation rubric for assessing accounting competency performance. Rubric validation was handed over to a lecturer, two competency testing practitioners from competency certification institutions and seven accounting subject teachers, for a total of ten people. The validation sheet contains whether or not the competency performance rubric for managing receivable cards developed by the researcher is appropriate. The data collection instrument used to obtain quantitative data is through a validation sheet which contains 5 aspects (a) suitability of content, (b) language, (c) writing, (d) appearance, and (e) benefits. This is to determine the validity of the product being made.

## **2.5. Data analysis technique**

The validity of the performance assessment rubric for managing receivable cards used is carried out through validation actions by experts (expert judgment), through discussion forums between experts (focus group discussion), to obtain input. To determine this agreement, the Aiken validity index is used with the formula:

$$V = \frac{\sum s}{n(c-1)} \quad (1)$$

With :

V = item validity index

s = score determined by the rater (r) minus the lowest score (l0) in the category

used n = number of raters and c = number of categories that raters can choose.

To determine the level of reliability, the Interclass Correlation Coefficient, Intraclass Correlation Coefficient (ICC) is used. If observer variation is assumed to be random, then the ICC formula:

ICC =

$$ICC = \frac{\sigma_s^2}{\sigma_s^2 + \sigma_o^2 + \sigma_e^2} \quad (2)$$

Where :

variance ( $\sigma^2$ ) is a measure of variation,

subscript s = subject ;

o= observer;

e= random error.

If observer variation is assumed to be fixed, then observer variation is not taken into account in calculating the total variation.

### 3. RESULTS AND DISCUSSION

The development of a performance assessment rubric for competency in managing receivable cards was developed with the aim of assisting teachers and students in a more objective, reliable and practical assessment. The assessment process is carried out to obtain, analyze and interpret data about student learning processes and outcomes which is carried out systematically and continuously, so that it becomes meaningful information in decision making.

Initial product creation was carried out using several steps and adapted to the situation and conditions in the research. These steps include: (1) Determining the competency standards that will be assessed. (2) Create definitions and provisions for concepts, skills that indicate the cognitive domain and performance domain. (3) Make provisions for vital skills that must be assessed. 4) Make provisions for the scale to be used. (5) Provide an overview of quality levels, (6) Create templates (7) Outline student ability achievements based on value intervals; (8) Assessment rubric

The ability assessed is carrying out receivables card work, including: Recording receivables mutations; Preparing letters of confirmation and recapitulation of receivables, recording receivables that cannot be collected; Record receivables received; Calculating estimated losses on receivables based on the percentage of receivables, and making aging analysis of receivables.

Competencies that are important for assessment include: Knowledge related to managing journals and subsidiary ledgers; Identified receivables mutation data; Data on receivables is recorded on each receivable card; Confirmed receivable balance; Receivables recapitulation report is presented; Accuracy of data entry into journals and subsidiary ledgers; Reconcile the subsidiary ledger system with journal and general ledger data, and systematically search for errors.

The range of assessment of competency achievement levels is described in quantitative and qualitative form. The quantitative form is 1 to 4, the qualitative form is 1 meaning being able to provide proof of transactions, 2 meaning being able to carry out identification, 3 meaning being able to do bookkeeping and 4 meaning being able to make reports based on standard operating procedures (SOP).

Table 1. Quality Gradation for Managing Receivables Cards

| GRADATION             | QUALITY DESCRIPTION                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------|
| 4. Presenting reports | Students will be able to make reports based on standard operating procedures                                                        |
| 3. Recording/booking  | Students can verify and record receivables mutations.                                                                               |
| 2. Identify           | Students can identify the beginning balance of receivables; Customer receivable mutation data; Data on other receivables mutations. |
| 1. Provide documents  | Students can provide the equipment needed for Receivables Management, and Proof of receivables transactions.                        |

The assessment scale is in accordance with the scoring usually carried out in Indonesia, namely with a cumulative value from 0 to 0. 100

The value interval for each quality gradation in the competency assessment rubric for managing receivable cards is 20, with details: unable 0 to 0. 20, able to provide documents 21 s.d. 40, able to identify 41 s.d. 60, able to record/book 61 s.d. 80 and able to report in accordance with standard operating procedures 81 s.d. 100. In summary, it can be seen in table 6.

In accordance with the planned value scale, a value interval will be created and an explanation of the student's competency regarding the value obtained; Furthermore, based on this value interval, students will be grouped into the final score.

Table 2, Interval of students achievement scoring

| NO | GRADE VALUE | DESCRIPTION                                                                                                                                                                                                                                   |
|----|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5  | 81 - 100    | Demonstrates mastery of managing receivable cards at the very satisfactory level. Understanding at this level is categorized as very capable; Understanding at this level is categorized as being able to make reports in accordance with SOP |
| 4  | 61 - 80     | Demonstrates a fairly good mastery of managing receivable cards; Understanding at this level is categorized as being able to record/book transaction documents;                                                                               |
| 3  | 41 - 60     | Demonstrates partial control of receivable cards; Understanding at this level is categorized as being able to identify transaction documents;                                                                                                 |



|   |         |                                                                                                                                                |
|---|---------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 2 | 21 - 40 | Shows a lack of understanding of managing receivable cards; Understanding at this level is categorized as being able to provide documents      |
| 1 | 1 - 20  | Shows very poor understanding of managing receivable cards; Understanding at this level is categorized as incompetent in financial accounting; |

The results of V-Aiken's calculations regarding the aspects of (a) appropriateness of content, (b) language, (c) writing, (d) appearance, and (e) benefits are respectively (a) 80.25 (b) 78.00 (c) 80.00 (d) 81.00 and (e) 80.33 with an average of 80.00, so in the opinion of experts and practitioners, the assessment rubric developed meets the content validity requirements.

Testing was carried out by providing 5 results of students' accounting competency performance to 6 raters. Then reliability was analyzed using intraclass correlation coefficients with the Two Way Mixed, Type Consistency, Confidence Interval 95% model. ICC analysis is used to determine the stability of an instrument, or determine the comparison between the variation caused by the measured attribute and the overall measurement variation.

The reliability value of performance competency standards for managing receivables cards, if estimated using an alpha coefficient of 0.993, shows an excellent alpha coefficient value.

Meanwhile, the intraclass correlation coefficient (intraclass correlation coefficient) is 0.962, thus exceeding the required minimum ICC coefficient criteria of 0.70, meaning that the performance assessment rubric for competency in managing receivable cards is reliable and has high stability.

Based on the results of research on the development of a performance assessment rubric for competency in managing receivable cards, the following research results can be seen.

First, the competency assessment rubric for managing receivable cards helps teachers provide objective assessments. Teachers realize that the use of student performance assessment rubrics provides several benefits. One of them is that it can be used as an evaluation guide. Assessment rubrics can also be used by teachers as an instrument to assess students' abilities, to help provide useful information, to reflect on ongoing teaching and learning activities, and to help teachers determine remedial activities.

Second, a rubric for assessing competency performance in managing receivable cards has been produced. The performance assessment rubric for competency in managing receivables cards is in the form of a performance assessment page in the form of an assessment format containing instructions for filling in the rubric, scoring instructions, notes on how to assess, a table for filling in the rubric containing assessment aspects, and guidelines for assessing performance in managing receivables cards containing assessment criteria and indicators. The assessment rubric is presented in the form of a rating scale. The score scale used in the performance assessment instrument for managing receivable cards is from 1 to 4.

Third, the developed rubric for assessing competency performance in managing receivable cards was declared suitable for use based on validation results provided by 1 material expert as theoretical validator, three practitioners as accounting education organizers, and six accounting subject teachers as educational stakeholder validators.

This research has limitations both in terms of standards, methods and implementation. Weaknesses in collecting data using questionnaires are that respondents provide irresponsible responses. Despite these limitations, the results of research on developing a rubric for assessing



competency performance in managing vocational school students' receivable cards can be used as a source of information to support students' academic activities.

#### **4. CONCLUSION**

Based on the results of the analysis and discussion, the following conclusions can be proposed.. Competencies that are important to assess in managing receivable cards include: Knowledge of accounting recording systems regarding the management of journal books, subsidiary ledgers; Receivable change documents identified; Data on receivables is recorded on each receivable card; Confirmed receivable balance; Receivables recapitulation report is presented; Accuracy of data entry into journals and subsidiary ledgers; Reconcile the subsidiary ledger system with journal and general ledger data, and systematically search for errors.

The basic competencies that students must master in the competency standards for managing receivable cards consist of identifying initial balances, mutations and adjustments. The validity of the competency assessment rubric for managing receivable cards that was developed was analyzed using V-Aiken at 0.80. Because the calculated results are larger in table numbers ( $c = 5, n = 10, \text{level } 5\% = 0.70$ ) and ( $c = 5, n = 6, \text{level } 5\% = 0.79$ ) it is concluded that the rubric developed meets content validity. The reliability of the performance assessment rubric for managing receivable cards is estimated using an alpha coefficient of 0.993 which is categorized as excellent, and an intraclass correlation coefficient (ICC) of 0.962 is concluded to be reliable and has high stability.

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