

# Feasibility of Audio Visual-Based Accounting Competency Test Training Material

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**Abstract**—An audio visual-based accounting technician competency test training material is needed. The purpose of the research is to examine the feasibility of audio visual-based accounting technician competency training materials and to analyze its effectiveness to improve the results of the accounting technician competency test. The research model used is descriptive research. The research data was obtained from primary and secondary sources that consisted of qualitative and quantitative data. The qualitative data were used suggestions about training materials. The quantitative data have used the results of the accounting competency test results. Data were obtained using the questionnaire with a Likert scale, from 1 (strongly disagree) to 4 (strongly agree). The subject of the feasibility test of audio visual-based training materials consisted of 5 content experts and 5 media experts. The subject of assessment of audio visual-based training materials consisted of 56 students that divided into two groups (treated and untreated class). Qualitative data were analyzed using descriptive qualitative analysis techniques, while quantitative data were analyzed using percentage analysis techniques. The percentage is the comparability of the number of ideal items answers. Conclusions determined by comparing percentages with an assessment percentages scale. The results of the study show that the audio visual-based accounting technician competency test training material is feasible in terms of content, presentation, graphics, and language. The training material effectively used to improve the results of the accounting technician competency test.

**Keywords**—training, competency, spreadsheets, audio visual

## I. INTRODUCTION

Certification is an acknowledgment from a particular organization or institution for one's expertise in a particular field. Accounting technician certification is one of the areas of certification. Accounting technician certification includes of junior technicians, pre-eminent, young, middle, and expert accounting technician certifications. Accounting technician certification is held by the Accounting Technician Professional Certification Institute. It is the only institution recognized by the government to hold accounting technician certification. Accounting technician certification is needed in the world of work.

Operating a spreadsheet processing program package is one of the competency units tested in the accounting technician competency test. Spreadsheets have been proven to assist accountants in analysing complex financial issues to provide useful information for business decisions [1]. Therefore, accountants must improve skills in using spreadsheet applications [2]. It is widely available and relatively easy to use [3]. The spreadsheet skills most needed

by accountants are data entry, format and calculation, charting, logic, and also skills for lookup and pivot tables [4]. Increased knowledge of spreadsheet can lead to better productivity [5].

Teaching material is one of the determinants of achieving learning effectiveness. Teaching materials are a set of learning tools or tools that contain learning material, methods, boundaries, and ways of evaluating systematically. Its interestingly designed in order to achieve the expected goals, namely achieving competence or sub-competence in all its complexity [6]. Teaching materials can take the form of printed material, audio-visual, audio, visual, and multi-media [7].

Audio-visual learning media is one type of media that has sound elements and image elements. Audio-visual learning is delivery and the use of instructional content that involves sound (auditory stimuli) and sight (visual stimuli). Audio visual-based teaching materials can improve student learning outcomes [8], more satisfying students [9], improving learning outcomes [10], and improve learning effectiveness [11].

The use of audio-visual aids enhanced the acquisition of knowledge and skills [12]. There is a measurable relationship between learning using audio-visual with student learning capacity [13]. Audio-visual instructional media can improve soft skills [14]. There are significant differences between learning using audio visual aids and conventional learning methods [15]. The use of audio-visual learning materials provides positive changes to the performance of students [16]. Audio-visual aids are effective in increasing the understanding of students [11], increasing the motivation and class participation [17], and substitutes monotonous learning environments [18].

Examine the feasibility of the audio visual-based accounting technician competency test training material is needed. The feasibility test of training materials includes the feasibility of content, presentation, graphics, and language. Appropriate training materials about spreadsheet processing programs are expected to improve the effectiveness of accounting technician competency test training.

## II. RESEARCH METHODS

The research model used is descriptive research. The research data was obtained in 2019 from primary and secondary sources that consisted of qualitative and quantitative data. The qualitative data were used suggestions about training materials. The quantitative data have used the results of the accounting competency test results. Data were

obtained using the questionnaire with a Likert scale, from 1 (strongly disagree) to 4 (strongly agree).

The subject of the feasibility test of audio visual-based training materials consisted of 5 content experts and 5 media experts. The feasibility test of training materials includes the feasibility of content, presentation, graphics, and language. The subject of assessment of audio visual-based training materials consisted of 56 students that divided into two groups (treated and untreated class). Student assessment includes (1) display of module; (2) learning indicators; (3) content of audio-visual media; (4) interest in the use of audio-visual media; and (5) the help with audio-visual media.

Qualitative data were analyzed using descriptive qualitative analysis techniques, while quantitative data were analyzed using percentage analysis techniques. The percentage is the comparability of the number of ideal items answers. Conclusions determined by comparing percentages with an assessment percentages scale. The assessment percentages scale is presented in Table I.

TABLE I. FEASIBILITY AND REVISION CRITERIA

| Value Range | Feasibility Level                              |
|-------------|--|
| 81.26-100   | Very feasible, no need to be revised           |
| 62.51-81.25 | Feasible, it doesn't need to be revised        |
| 43.76-62.50 | Less feasible, it needs to be revised          |
| 25.00-43.75 | Very infeasible, it really needs to be revised |

### III. RESULTS AND DISCUSSIONS

#### A. Audio-Visual Based Training Materials

Audio visual-based training materials are made based on a needs analysis that has been carried out. Needs analysis considers the curriculum, learning resources, and learning participants. Audio visual-based accounting technician competency training materials development is for the use of spreadsheet processing programs. Spreadsheet processing programs are used to process financial accounting data including cash and cash equivalents, accounts receivable, inventories, investments, fixed assets, intangible assets, liabilities, equity, income, and expenses.

Before making audio visual-based training material, spreadsheet-based accounting applications need to be made. Spreadsheet-based applications are made using the various features available in spreadsheet applications optimally. Spreadsheet processing skills are needed among others, entering and editing worksheet data, doing worksheet operations, working with cells and ranges, creating, changing, and working with tables, worksheet formatting, work with formulas and functions, creating charts and graphics, using advanced features, and printing the work. Training materials are more focused on the use of functions and formulas such as text functions, dates and times, count and sum, look up, and financial functions. Some material also needed about using advanced features such as using custom number formats, using data validation, linking worksheets, and protecting. The initial display of audio visual-based training materials is presented in Fig. 1.



Fig. 1. Initial display of audio visual-based materials.

#### B. Feasibility of Audio visual-Based Training Materials

The training material that was tested for its feasibility was training material on the competency test of audio-visual accounting technicians about spreadsheet processing programs. Spreadsheet-based accounting applications are technically and operationally feasible for use in learning [19]. The use of a spreadsheet application in the accounting learning process can improve the effectiveness of accounting learning [20]. The training material is about utilizing a spreadsheet processing program to process accounting data such as cash accounting, accounts receivable, inventory, fixed assets, liabilities, equity, and income and expenses.

Module feasibility testing is carried out by experts. Expert tests include material expert test and media expert test. Test material experts regarding the feasibility of content and the feasibility of presentation. Test media experts regarding the feasibility of graphics and language feasibility. The feasibility test for content by material experts includes (1) conformity with competency standards and basic competencies; (2) conformity with training characteristics; (3) conformity with training needs; (4) the truth of the substance of the learning material; (5) benefits for additional insight; and (6) conformity with social moral values.

Based on the examination of material experts on contents feasibility of the module, it can be seen that the average percentage of the content aspect assessment is 87.5%. This means that from the content aspect, the audio visual-based accounting technician competency test training material is stated very feasibly. Audio-visual-based training materials are in accordance with the standards of competence and basic competencies, according to the characteristics of training, training material needs, learning materials, additional insights, and conformity with moral and social values. Visually, the results of the content feasibility test by material experts is presented in Table II.

The feasibility test of the presentation by material experts includes (1) clarity of objectives (indicators) to be achieved; (2) order presentation; (3) giving motivation; (4) attraction; (5) interactions (giving stimulus and response); and (6) complete information.

**TABLE II. RESULTS OF THE CONTENT FEASIBILITY ASSESSMENT**

| No.     | Assessment Items                                  | Total Score | Percentage (%) |
|---------|---|-------------|----------------|
| 1       | Conformity with Standard and Basic Competencies   | 17          | 85.00          |
| 2       | Conformity with the characteristics of the course | 17          | 85.00          |
| 3       | Conformity with the needs of teaching materials   | 18          | 90.00          |
| 4       | The truth of the substance of learning material   | 18          | 90.00          |
| 5       | Benefits for additional insight                   | 17          | 85.00          |
| 6       | Conformity with moral values, and social values   | 18          | 90.00          |
| Average |   |             | 87.50          |

Based on the examination of material experts on the feasibility of the presentation, it can be seen that the average percentage of assessment aspects of presentation is 81.67%. This means that from the aspect of the presentation, the audio-visual accounting technician competency test training material is declared very feasibly. Audio visual-based training materials have clear objectives, ordered content, able to provide motivation, has an attraction, allows interaction, and complete information. Furthermore, the results of the feasibility test for presentation by material experts is presented in Table III.

**TABLE III. RESULTS OF THE PRESENTATION FEASIBILITY ASSESSMENT**

| No.     | Assessment Items                          | Total Score | Percentage (%) |
|---------|---|-------------|----------------|
| 1       | Clarity of objectives to be achieved      | 17          | 85.00          |
| 2       | Order of presentation                     | 17          | 85.00          |
| 3       | Giving motivation                         | 16          | 80.00          |
| 4       | Attractiveness                            | 17          | 85.00          |
| 5       | Interaction (giving stimulus and respond) | 15          | 75.00          |
| 6       | Completeness of information               | 16          | 80.00          |
| Average |   |             | 81.67          |

Testing the feasibility of graphics by media experts includes (1) the use of type and font size (font); (2) layout; (3) illustrations; (4) pictures, photos; (5) audio; and (6) display design. Based on the testing of media experts on the feasibility of the graphic, it can be seen that the average percentage of evaluation aspects of graphics is 81.67%. This means that from the graphic aspect, the audio-visual accounting technician competency test training material is declared very feasibly. Audio visual-based training materials use the appropriate font type and size, layout, illustration, image, audio, and the appropriate display design. The assessment of picture/photo and audio quality is still relatively low because, in this audio-visual based training material, there is not much use of picture/photo. The picture/photo and audio used are produced by limited equipment. Visually, the results of the feasibility test by media experts is presented in Table IV.

**TABLE IV. RESULTS OF THE GRAPHICS FEASIBILITY ASSESSMENT**

| No.     | Assessment Items       | Total Score | Percentage (%) |
|---------|------------------------|-------------|----------------|
| 1       | Use font type and size | 17          | 85.00          |
| 2       | Layout                 | 17          | 85.00          |
| 3       | Illustration           | 17          | 85.00          |
| 4       | Picture/Photo          | 15          | 75.00          |
| 5       | Audio                  | 15          | 75.00          |
| 6       | Display design         | 17          | 85.00          |
| Average |                        |             | 81.67          |

Language feasibility testing by media experts includes (1) readability; (2) information clarity; (3) conformity with language rules; (4) the use of good and correct language; (5) the use of language effectively and efficiently.

Based on the testing of media experts on linguistic feasibility, it can be seen that the average percentage of language assessment aspects is 84.00%. This means that from the language aspect, the audio-visual accounting technician competency test training material is stated to be very feasible. Audio visual-based training materials be readable, the information is clear, in accordance with the method, and has used the language effectively and efficiently. Visually, the results of the language feasibility test of the module concept by media experts are presented in Table V.

**TABLE V. RESULTS OF THE LANGUAGE FEASIBILITY ASSESSMENT**

| No.     | Assessment Items                            | Total Score | Percentage (%) |
|---------|---|-------------|----------------|
| 1       | Legibility                                  | 16          | 80.00          |
| 2       | Information clarity                         | 17          | 85.00          |
| 3       | Conformity with rules                       | 17          | 85.00          |
| 4       | Good and correct language                   | 17          | 85.00          |
| 5       | Use of language effectively and efficiently | 17          | 85.00          |
| Average |   |             | 84.00          |

*C. Effectiveness of Audio-Visual Based Training Materials*

The effectiveness of the test subjects from audio visual-based accounting technician material competency test training is students taking the accounting technician competency test. The effectiveness test subjects amounted to 56 students who divided into two classes. The first class is the class whose training uses audio-based teaching materials, with 28 participants. The second class is the class whose training does not use audio visual-based teaching materials, with 28 participants. Both classes are given training at the same time with the same duration of time. The contents of the training material are the same, but the lecturers who provide training are different.

Student assessment of audio visual-based training materials includes (1) display module; (2) learning indicators; (3) content of audio-visual media; (4) interest in the use of audio-visual media; and (5) help with audio-visual media. Based on the student assessment can be seen that the average percentage of assessment is 84.82%. It means that audio visual-based training materials have good display modules, learning indicators, audio-visual media content. Students are interested and feel helped by using audio visual-based training materials. Student perceptions of audio-visual media is presented in Table VI.

TABLE VI. STUDENT PERCEPTIONS OF AUDIO-VISUAL MEDIA

| No.     | Assessment Items               | Total Score | Percentage (%) |
|---------|--------------------------------|-------------|----------------|
| 1       | Display module                 | 96          | 85.71          |
| 2       | Learning indicator             | 95          | 84.82          |
| 3       | Content of audio-visual media  | 93          | 83.03          |
| 4       | Interest in audio visual media | 97          | 86.60          |
| 5       | Help with audio visual media   | 94          | 83.92          |
| Average |                                |             | 84.82          |

The results of the accounting technician competency test show that in the treatment class, 25 students were declared competent and 3 students were declared not competent yet. In the untreated class, 23 students were declared competent and as 5 students were declared not yet competent. Visually, the results of the accounting technician competency test are presented in Fig. 2.

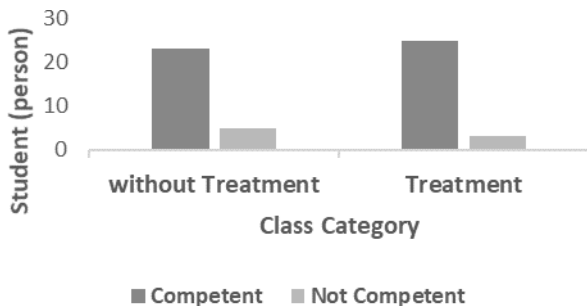


Fig. 2. Results of the accounting competency test.

The results of the accounting technician competency test show that the graduation rate of students whose training uses audio visual-based training materials (89.28% > 82.14%). This means that the use of audio visual-based training materials has been effectively used to improve the results of the accounting technician competency test.

The findings of this study are in line with previous research that there are differences in the effect of the use of audio-visual media and without audio-visual media to achievement study [21]. There are also differences in learning motivation [22], encouraged better motivation for students, than others [23]. Use of audio visual-based training materials enhanced and facilitated the acquisition of knowledge, and significantly affects students' soft skills. The use of audio-visual media able to improve the quality and

results of learning and increase the success level of students [24].

#### IV. CONCLUSION

The purpose of the research is to examine the feasibility of audio visual-based accounting technician competency training materials and to analyse its effectiveness to improve the results of the accounting technician competency test. The results of the study show that the audio-visual accounting technician competency test training material is feasible in terms of content, presentation, graphics, and language. This training material is effectively used to improve the results of the accounting technician's competency test.

The limitations of the study include the measurement of students' initial abilities not yet done with practical exams using spreadsheet applications, only done using the students' own perceptions. The treatment class is not fully comparable because the division of class members is based on the registration number. There is no guarantee that students in the class without treatment do not receive audio-visual training materials. There is a grace period between the implementation of the training and the implementation of the accounting technician competency exam.

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