



DEVELOPMENT OF CONSTRUCTIVIST-BASED STUDENT WORKSHEETS ON BASIC MANAGEMENT COMPETENCIES IN CLASS X AT TERENAM NEGERI HIGH SCHOOL 2 SEMBAWA

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Abstract

The Entitled Research on Development of Constructivist Based Student Worksheets in Basic Management Competencies in Class X in Sembawa State Senior High School 2 aims to produce Constructivistic Based Student Worksheets in valid and practical Management Basic Competencies and have the effectiveness of student learning outcomes in Schools. Upper middle class. This research method uses development research using the Rowntree Tesmer model development model. This research through a phase consisting of three stages, namely the planning stage, the development stage, and the evaluation phase. LKPD is based on constructivist management material, from the results of expert review assessment obtained from media experts, material experts, and learning design experts, with very valid categories, from the results of One to One test obtained in very practical categories. Constructivist based LKPD management materials can be used in creative and innovative learning processes. Constructivist based LKPD management material developed, from the results of the Small group test categorized as very practical so that it can be used in the learning process and improve students' understanding of the concept of learning. Constructivist-based LKPD developed has effectiveness on student learning outcomes. This can be seen from the results of the posttest of students at the product trial stage in the field. The average student learning outcomes at pretest are very low while the average student learning outcomes at the posttest has increased after learning using LKPD based on constructivist management material and obtained N-gain which is categorized as medium. Based on the results of the research that has been done, the suggestions that can be given are as follows. For Educators, it is hoped that constructivist-based LKPD teaching materials produced can be used as one of the teaching materials that facilitate the delivery of subject matter, and as an effort to improve learning so that creative and innovative learning is created. For schools, it is hoped that constructivist-based LKPD teaching materials can be used in the learning process and can improve student learning outcomes, For students, it is recommended that students use constructivist-based LKPD this management material as teaching material in the learning process so as to improve students' understanding of the concept of learning and for other researchers, expected to be able to develop LKPD constructivist based on other material and can be validated by constructivist experts.

Keywords: Development, LKPD, Management

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I. Introduction

Education is a fundamental element in the development of quality human resources, especially in facing the challenges of globalization and the development of information technology. One of the aspects that needs to be continuously developed in education is a more interactive learning method and encourages students to be more active in the learning process. At the Senior High School (SMA) level, the application of appropriate learning methods is essential to help students understand the material in depth and build skills that are relevant to their future lives. One effective way to support this process is to use constructivism-based Student Worksheets (LKPD). (Gusnadi et al., 2024; Made et al., 2024; Oviyanti, 2013) (Ramadhani et al., 2022)

Constructivism is a learning theory that emphasizes the active role of students in building their own knowledge through experience and interaction with the surrounding environment (Piaget, 2007). In the context of management learning in high school, this approach is very relevant to help students not only memorize managerial theories, but also to understand those concepts in real contexts and build critical thinking skills that they can apply in daily life. Therefore, the development of constructivism-based LKPD on basic management competencies in class X of high school is important to create an effective and meaningful learning experience.

This research aims to develop a constructivism-based LKPD that can increase students' understanding of management materials, especially the basic competencies taught in class X of SMA Negeri 2 Sembawa. This LKPD is designed to encourage students to actively participate in learning through various activities that involve them directly in the problem-solving process, group discussions, and practical experiments related to management. The use of constructivism-based LKPD is expected to make learning more creative, innovative, and relevant to the needs of the world of work in the future. (Ashar et al., 2024; Lase & Telaumbanua, 2024)

Along with the advancement of technology and information, technology-based learning is also an integral part of today's education. The use of technology in making LKPD, for example through digital platforms, allows students to access materials and assignments more flexibly and efficiently. This will support the achievement of more effective learning goals, especially in the context of management teaching that requires a dynamic and responsive approach to the times.

Several previous studies have shown that the application of a constructivistic approach in learning can improve student learning outcomes. According to Novita and Ahmad (2022), the use of constructivist-based LKPD in economic learning in high school is able to improve students' understanding of concepts and analytical skills. Another research conducted by Susanti (2021) also concluded that constructivist-based LKPD can develop students' critical and creative thinking skills, as well as increase active participation in learning activities. Therefore, the development of constructivist-based LKPD for basic management competencies in class X of SMA

Negeri 2 Sembawa is expected to have a positive impact on the quality of learning that takes place.

It is important to note that the development of constructivism-based LKPD involves not only the preparation of materials and tasks, but also includes a learning design that involves a variety of activities that allow learners to actively build their knowledge. This is in line with the basic principle of constructivism which states that knowledge is obtained through active interaction between individuals and their social environment (Vygotsky, 1978). Therefore, the development of this LKPD is expected to meet the needs of students who are more individual, as well as improve their managerial skills practically and applicatively. (Astuti, 2021)

The method used in this study is Research and Development (R&D) with the Rowntree-Tesmer development model. This model involves three main stages: planning, development, and evaluation. At the planning stage, LKPD is designed by referring to the principles of constructivism and basic competencies that must be achieved by students. At the development stage, LKPD is tested for validity by experts in materials, media, and learning design, and its practicality is tested through trials with small groups. At the evaluation stage, LKPD is tested in the field to see its effectiveness in improving student learning outcomes.

The results of this research are expected to contribute to the development of more practical and effective constructivism-based teaching materials in high school. By using this LKPD, students not only gain theoretical knowledge about management, but also practical skills that they can apply in a variety of real-life situations. In addition, this constructivism-based LKPD is also expected to provide a more meaningful and enjoyable learning experience for students, and can be an innovative teaching material for teachers in improving the quality of learning.

II. Research Methods

This research is a development research that aims to produce teaching materials in the form of constructivist-based LKPD. The main focus is to improve students' understanding of management concepts through an interactive and collaborative approach. This study not only assesses the feasibility (validity and practicality) of LKPD, but also evaluates its effectiveness on student learning outcomes.

This research was conducted at SMA Negeri 2 Sembawa with the research subject being class X students.

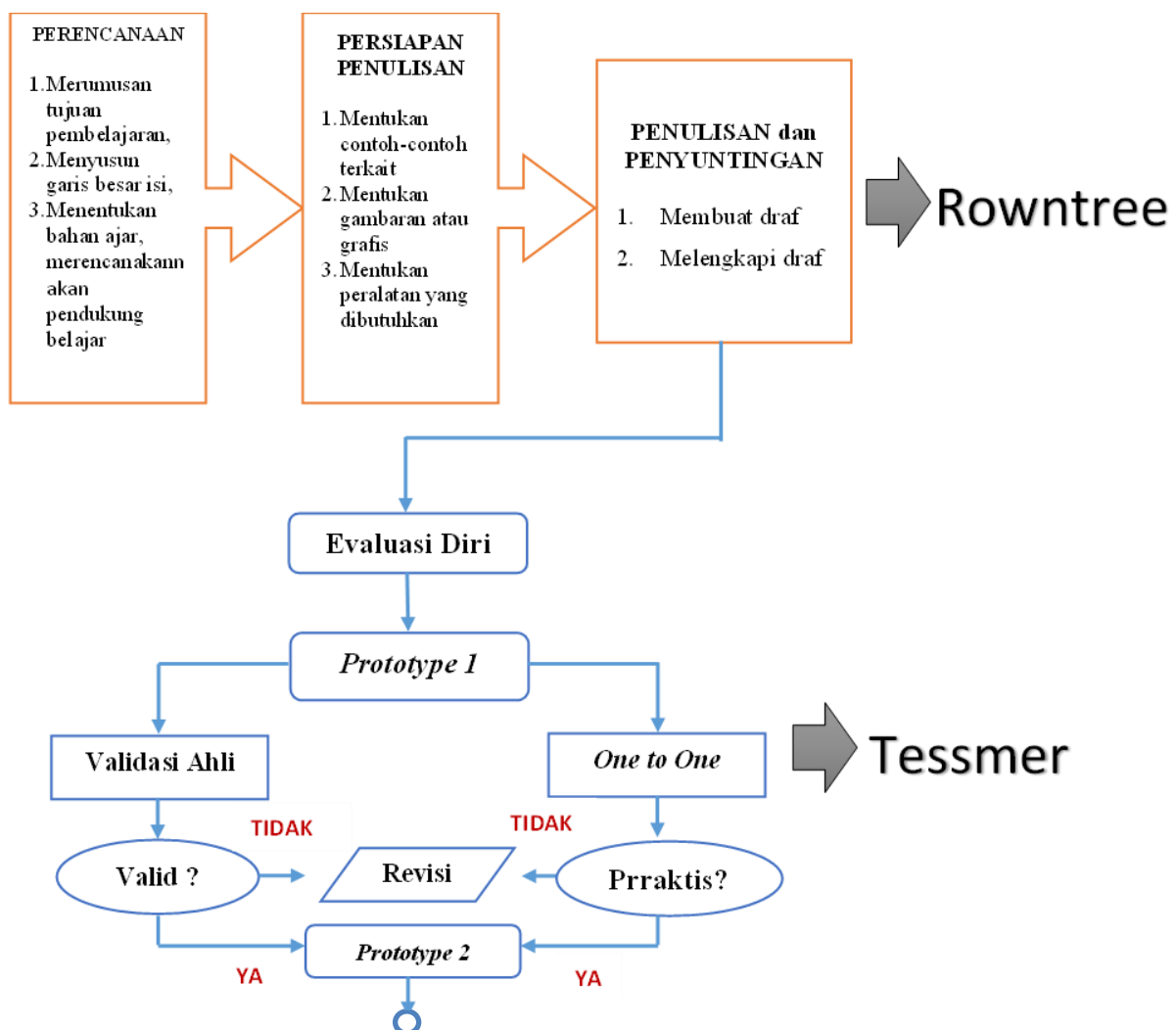
Research Procedure

The LKPD development procedure follows the following steps:

1. Planning Stage:

- a. Conduct a needs analysis to identify learning problems faced by students and teachers.
- b. Determine learning objectives based on relevant syllabi.

- c. Compile an outline of the content of the material and select appropriate supporting media.
2. **Development Stage:**
 - a. Create a preliminary design (prototype 1) that includes material content, graphic design, and other supporting tools.
 - b. Validate by experts in media, materials, and learning design to ensure the quality and suitability of teaching materials.
3. **Evaluation Stage:**
 - a. Involve students in formative evaluations, including one-to-one, small group, and field tests.
 - b. Using the results of the evaluation to revise and improve the LKPD until it reaches the final version.



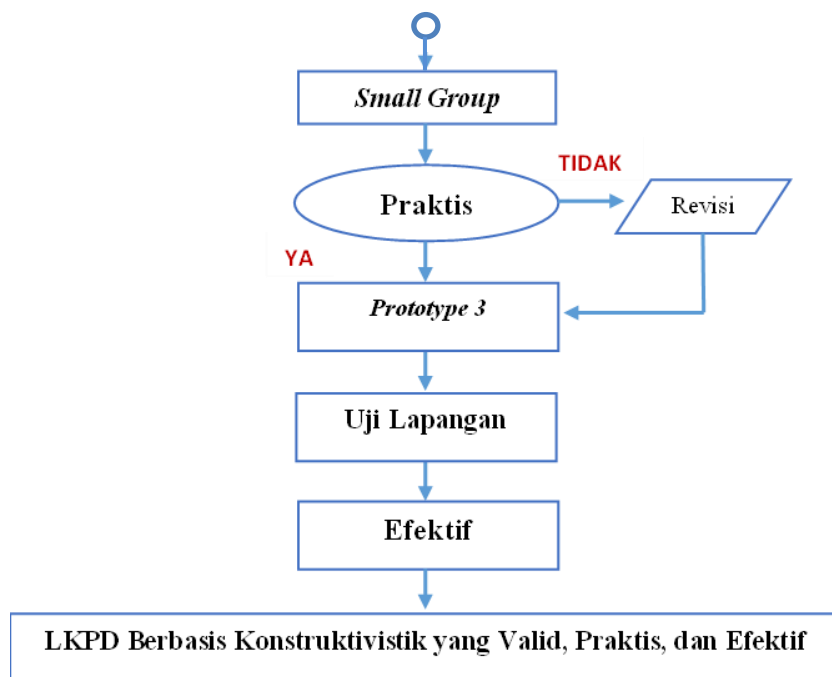


Figure 1 LKPD Development Research Procedure (Rowntree and Tessmer Modifications)

Data Collection Techniques

This study uses several instruments to collect data, namely:

1. **Validation Sheet:** To assess the suitability and feasibility of the LKPD by experts.
2. **Test:** To measure the effectiveness of teaching materials on student learning outcomes, both before (pre-test) and after (post-test) the use of LKPD.
3. **Questionnaire:** To get feedback from students regarding the practicality of teaching materials.
4. **Interview:** To explore students' experiences and views on the LKPD used.
5. **Documentation:** To record visual data during the research process.

Data Analysis Techniques

Data analysis was carried out in a quantitative descriptive manner, by changing the data from validation and trial results into qualitative criteria. The validity and practicality of the LKPD were calculated using the Likert scale, while the student learning outcomes were analyzed using learning outcome categories based on pre-test and post-test scores.

Research Results and Benefits

The results of this research are expected to make a theoretical contribution to the development of constructivist-based teaching materials and practical benefits, such as:

1. Improving the quality of economic learning in schools.

2. Facilitate students to learn actively and independently.
3. It is a reference for other researchers in the development of relevant teaching materials.

III. Results and Discussion

This research has completed the development of a constructive-based Student Worksheet (LKPD) on Management Materials in Economics Subjects. The developer of this constructivist-based LKPD uses the Rowntree development model modified with Tessmer evaluation. In this study, the researcher has produced LKPD Management Materials in Economics Subjects that are valid, practical, and effective on student learning outcomes.

1. Validity of LKPD Teaching Materials Based on Constructivism Management Materials

The constructivist-based LKPD teaching material product Management Material that the researcher has made (prototype 1) is then revised by an expert (*Expert Review*). This expert revision aims to produce a valid constructivist-based LKPD teaching material product. Expert revision is carried out with experts from the aspects of material, media, and learning design, consisting of one expert from the material aspect, one expert from the media aspect, and two experts from the learning design aspect. The results of the expert revision are in the form of qualitative and quantitative data. Qualitative data is in the form of suggestions from experts to improve *the prototype*, while quantitative data is obtained from the average of the assessment results of experts to determine the validity of the constructivist-based LKPD teaching materials developed for Management Materials. Testing the validity of constructivist-based LKPD teaching materials is carried out through the expert revision stage. The results of the expert revision are not only in the form of comments and suggestions, but also in the form of a quantitative assessment of the constructivist-based LKPD teaching materials developed. Through the average assessment results of the experts, a figure of 0.94 from material experts, 0.81 from media experts, and 0.80 from learning design experts, so that the constructivist-based LKPD teaching materials developed were declared very valid and could be tested according to suggestions.

At the revision stage of experts with material experts, 2 levels of validity categories were obtained, namely very valid, and valid, with the highest validation coefficient in the very valid category of 1.00 while the lowest validation coefficient in the valid category was 0.75. At the revision stage of experts with media experts, 2 levels of validity categories were obtained, namely very valid and valid, with the highest validation coefficient in the very valid category of 1.00 while the lowest validation coefficient in the valid category was 0.75. At the revision stage, experts with media learning design experts obtained 1 level of validity category, namely valid, with the lowest validation coefficient in the valid category of 0.75.

In addition to quantitative data, at the revision stage, data was also obtained qualitatively using *walkthrough data collection techniques*, by asking experts to provide comments and suggestions on the constructivist-based LKPD teaching materials that have been developed. Furthermore, comments and suggestions from experts are used as a reference to improve constructivist-based LKPD teaching materials.

Comments and suggestions obtained from material experts are to increase the content of the material and divide the learning into two. Comments and suggestions obtained from learning media experts are (1) The selection of inappropriate letters and the selection of images on the cover. The decision to revise the suggestion is expert advice followed by improving the LKPD cover. In the material section, images are not provided to support the discussion. The decision to revise the suggestion is that expert advice is followed. Comments and suggestions obtained from learning design experts are Evaluation of the use of letters, adding captions to gambar and italic foreign terms.

Based on the assessment of each validator, it can be concluded that the constructivism-based LKPD management material that has been developed by the researcher (*Prototype 1*) is very valid and can be used in the next research stage.

2. Practicality of Constructivist-Based LKPD Teaching Materials Management Materials

From the resulting Prototype 1, the practicality will be tested in a one-to-one *test*. The results of the one-on-one test, in addition to comments and suggestions on constructivist-based LKPD teaching materials from students, were also obtained quantitative assessment results in the form of average student assessment results. In the *one-to-one* stage with 3 (three) students/respondents, a validation coefficient of 0.87 ; 0.85 ; and 0.85 with the category of practicality level respectively, namely Very Practical; Very practical; and Very Practical. The average result of the respondents' quantitative assessment of the constructivist-based LKPD teaching materials developed was 0.86 and was categorized as Very Practical. And it can be used in research.

The indicators that fall into the category are very practical, namely the language in the constructivist-based LKPD LKPD is easy to understand, this LKPD is interesting and helpful in learning and good and motivated to learn. Qualitative data was also obtained at the *one-to-one stage*, namely in the form of comments and suggestions from students/respondents. After being analyzed from 3 respondents, they gave positive comments on the constructivist-based LKPD teaching materials that have been developed.

Based on the results of the questionnaire that has been used, students stated that constructivist-based LKPD teaching materials are very good if applied in learning because they can increase students' motivation to learn. This is in line with research that has been conducted by Husnul Khatimah, et al. (2015) which revealed that learning using the teaching materials of the Apos Theory LKS (*Action, Prosesse,*

Object, Shceme) can improve student learning outcomes. Cica Aisyah Nurlatifah¹ et al., (2015) stated that LKS based on the *Learning Cycle 5e* Model has a positive effect on learning outcomes and is able to develop students' creative thinking skills.

The practical category obtained from the results of student assessments is because the constructivist-based LKPD teaching materials that have been made have met the needs of students based on the results of the analysis of student needs that have been carried out by previous researchers, namely the teaching materials used by students only use books from one publisher. Students do not use LKPD in learning.

3. The Effectiveness of Constructivist-Based LKPD Teaching Materials on Student Learning Outcomes

This constructivist-based LKPD teaching material was piloted on the research subject, namely grade X students of SMAN 1 Sembawa in February-March 2019. The implementation of the research was carried out 2 times. At this stage, the researcher provides questions to students in the form of multiple-choice questions which aim to determine the effectiveness of the teaching materials that have been made. At the beginning of learning, students are given a *pretest* to compare the scores obtained before and after learning using constructivist-based LKPD teaching materials or to measure the effectiveness before and after the treatment. The average pretest results obtained by students were 50.66 and were still very far from the minimum completeness value, then students learned using constructivist-based LKPD teaching materials.

In the first meeting, the teacher motivated the students by displaying pictures about the meaning of management, the benefits of management, management functions and types of management. Then in *Aperception* it asks questions about the meaning of management, the benefits of management, management functions and the types of management related to the material to be studied.

Then the teacher conveys the learning scenario. Furthermore, the core activities are divided into five stages, namely: (1) orientation stage, in the orientation stage students read material about the meaning of management, management benefits, management functions and types of management, (2) elitation stage, in the extraction stage students observe the images in the LKPD, (3) idea reconstruction stage, in the idea reconstruction stage students answer questions in the LKPD as a result of reading the material, looking at the pictures in the LKPD, (4) the idea implementation stage, in the stage of implementing the idea, students discuss with their group friends to answer questions in the LKPD as a result of reading the material, looking at the pictures in the LKPD, (5) the review stage, in the review stage, students present the results of their group discussion in front of the class and collect the results of their discussion to the teacher. In the closing activity, students were guided to conclude the subject matter at that time and gave students an assignment to learn the next teaching material contained in the constructivist-based LKPD teaching materials.

In the second meeting, the initial learning activity of the teacher motivated the students by displaying pictures about the material on the Implementation of Management Functions in Activities at School, then in the perception gave questions about the material on the Implementation of Management Functions in Activities at School related to the material to be studied. Then the teacher conveys the learning scenario. Furthermore, the core activities are divided into five stages, namely: (1) orientation stage, in the orientation stage students read material about the Application of Management Functions in Activities in School, (2) elicitation stage, in the elicitation stage students observe the images in the LKPD, (3) idea reconstruction stage, in the idea reconstruction stage students answer questions in the LKPD as a result of reading the material, looking at the pictures in the LKPD, (4) the idea implementation stage, in the stage of implementing the idea, students discuss with their group friends to answer questions in the LKPD as a result of reading the material, looking at the pictures in the LKPD, (5) the review stage, in the review stage, students present the results of their group discussion in front of the class and collect the results of their discussion to the teacher. In the closing activity, students were guided to conclude the subject matter at that time and gave students an assignment to learn the next teaching material contained in the constructivist-based LKPD teaching materials.

At the last meeting, a posttest was carried out which aimed to test students' mastery of teaching materials after learning to use constructivist-based LKPD teaching materials. The average posttest result was 81.66 with the highest score of 100. Based on the data of *the pretest* and *posttest* results, it shows an increase of 31.00 and an *N-gain score* of 0.65, which means that the effectiveness of the constructivist-based LKPD teaching materials that have been developed is good. This is based on the *N-gain score classification table* which states that the acquisition of a score of $0.7 > N_{\text{gain}} \geq 0.3$ is categorized as moderate. This can be interpreted that the effect of the use of constructivist-based LKPD teaching materials on the increase in learning outcomes is moderate.

The *n-Gain value* in Table 4.10 is for all students in class X who took the *pretest* and *posttest* with different categories. *Pretest and posttest scores as well as n-Gain* based on the categories of high, medium, and low ability students can be seen in the Appendix. The average *n-Gain* score for 7 high-ability students is 0.79. If we associate the *n-Gain* value of 0.79 with the *n-Gain* category in Table 3.4, it will be included in the high category, meaning that the use of highly constructive-based LKPD teaching materials has an effect on the increase in the scores of high-ability students. There were 17 students with medium abilities with an average *n-Gain* score of 0.43 in the medium category.

A total of 7 students were included in the low category, with an average *n-Gain* score of 1.00. The thing that lowers the effectiveness value is that they don't learn anymore because they think they already understand from the beginning about the materi to be learned and they become less active. This is one of the factors for the low *n-gain* of each student because they are less active in learning.

The cause of the moderate influence of constructivist-based LKPD teaching materials in improving student learning outcomes according to the researcher is that there are still students who are included in the low criteria for improving learning outcomes because there is still a lack of mastery of material concepts in students. However, the learning outcomes of students as a whole have reached the class completion criteria, which is 97%.

The constructivist-based LKPD teaching materials developed have been declared valid and can be tested according to suggestions by experts both from material and language, media design, and learning design. In addition, this constructivist-based LKPD teaching material has been categorized as practical for use by students because the LKPD that has been created has met the needs of students based on the needs analysis carried out previously. In addition, students give a good response during the learning process by using constructivist-based LKPD teaching materials, material on the role of economic actors in economic activities. During the learning process, students also look active and enthusiastic in learning. Based on the results of research that has been conducted by researchers, constructivist-based LKPD teaching materials can improve student learning outcomes.

Advantages and Disadvantages of Constructivism-Based LKPD Management Materials

From the results of research that has been developed by researchers on constructivist-based LKPD teaching materials, there are several advantages, including the following:

1. Can be used for *Individual Learning* and can be used outside of classroom learning
2. Increasing student learning motivation
3. Facilitates the learning process
4. The material contained in this LKPD is shorter so that students can more easily understand the content of the subject matter.
5. This constructivist-based LKPD is equipped with fill-in questions so as to train students to think critically.
6. This constructivist-based LKPD is equipped with images that are adapted to the subject matter.
7. This constructivist-based LKPD is equipped with images taken directly from the student's living environment.

In addition to having several advantages, the constructivist-based LKPD material on the role of economic actors in this economic activity also has several weaknesses, including the following:

1. The material developed in this constructivist-based LKPD only uses one competency standard.
2. This constructivist-based LKPD still has several images taken from *internet sources*.

Based on the shortcomings in the constructivist-based LKPD management material that has been developed, it is hoped that it can be used as a consideration for other researchers or developers to produce a better constructivist-based LKPD.

IV. Conclusion

Based on the results of the research that has been carried out regarding the development of constructivism-based LKPD teaching materials for management materials, it can be concluded as follows.

1. LKPD is based on constructivism of management materials, from the results of expert review assessments obtained from media experts, material experts, and learning design experts, with a very valid category, from the results of the One to One test obtained with a very practical category. This constructivist-based LKPD management material can be used in a creative and innovative learning process.
2. LKPD is based on constructivism management materials developed, from the results of the Small group test is categorized as very practical so that it can be used in the learning process and increase students' understanding of learning concepts.
3. The constructivist-based LKPD developed has an effectiveness on student learning outcomes. This can be seen from the results of the posttest of students at the product trial stage in the field. The average learning outcome of students at the time of the pretest was very low while the average learning outcome of students at the time of the posttest increased after learning using a constructivist-based LKPD of management materials and obtained N-gain which was categorized as moderate.

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