DEVELOPMENT HOTS-ORIENTED MS WORD 2019 PRACTICE QUESTIONS ON THE OFFICE AUTOMATION APPLICATION COURSE

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ABSTRACT

This paper develops MS Word 2019 practice questions oriented with the HOTS (Higher Order Thinking Skills) on the Office Automation application course. This development research uses the limited ADDIE model, namely Analysis, Design, and Development. The analysis is carried out by identifying problems in the Office Automation application course. Subsequently, the developmental planning of the instrument is carried out. The HOTS-oriented practice questions contain questions in the form of descriptions using indicators of critical thinking, creative thinking, and problem-solving. The data are collected from the assessment of two validation experts using expert validation assessment sheets and responses from 24 students through questionnaires. Data analysis used quantitative descriptive analysis techniques. The research results imply that the HOTS-oriented MS Word 2019 practice questions are feasible to use as teaching materials in the Office Automation application course. It is based on the material expert's assessment was 85.6 with a very feasible category and the result of students' responses was 83.3 with a very feasible category. The assessment aspects of expert validation include aspects of the relationship between the questions and the material, aspects of the question depth with learning outcomes, and aspects of language.

Keywords: practice question, HOTS, office automation application

PENGEMBANGAN SOAL LATIHAN MS WORD 2019 BERORIENTASI HOTS PADA MATA KULIAH APLIKASI AUTOMASI PERKANTORAN

ABSTRAK

Artikel ini mengembangkan soal latihan materi MS Word 2019 berorientasi HOTS (*Higher Order Thinking Skills*) pada mata kuliah aplikasi Automasi Perkantoran. Penelitian pengembangan ini menggunakan model ADDIE terbatas yaitu *Analysis, Design, Development*. Analisis dilakukan dengan mengidentifikasi masalah pada mata kuliah aplikasi Automasi Perkantoran. Selanjutnya dilakukan perencanaan pengembangan instrument soal. Soal berorientasi HOTS ini berisi soal-soal dalam bentuk uraian dengan menggunakan indikator kompetensi berpikir kritis, berpikir kreatif, dan pemecahan masalah. Data berasal dari penilaian dua pakar pada tahap validasi dengan menggunakan lembar penilaian validasi ahli dan respon dari 24 mahasiswa menggunakan lembar kuesioner. Analisis data menggunakan teknik analisis deskriptif kuantitatif. Hasil penelitian mennjukkan bahwa soal latihan MS Word 2019 berorientasi HOTS dikatakan layak digunakan sebagai bahan ajar pada mata kuliah aplikasi Automasi Perkantoran. Hal ini didasari pada penilaian ahli materi sebesar 81,6 (sangat baik) dan hasil respon mahasiswa diperoleh skor sebesar 83, 6 (sangat baik). Aspek penilaian pada validasi ahli meliputi aspek keterkaitan soal dengan materi, aspek kedalaman soal dengan capaian pembelajaran, dan aspek Bahasa.

Kata Kunci: soal latihan, HOTS, aplikasi automasi perkantoran

INTRODUCTION

In the industrial era 4.0, competition in all fields requires someone to have competence, creativity and innovation. This is very necessary so that someone is able to compete and be ready in all conditions. Critical thinking is one way to foster a creative and innovative attitude. Therefore, this critical thinking attitude really needs to be instilled early on in students. Critical thinking is one of the 21st century skills that requires students to be competent with a number of skills required (Junaidi, M. A., 2020). Critical thinking can be taught by accustoming students to solving problems faced both at school and in the environment where they live and socialize.

Critical thinking is part of Higher Order Thinking Skills (HOTS). Thomas and Thorne as

quoted by Wicaksono, A. R (2021) mentions that HOTS is a pattern of thinking that does not merely state facts, remember facts, apply rules, formulas, and procedures. The concept of critical thinking was also put forward by Rofiah, E (2013) states that HOTS is an ability to associate, interpret, and transform existing knowledge/experience in order to be able to think critically, think creatively in an effort to draw conclusions, and solve problems in actual conditions or latest. The writers' statement is also in line with the statement of Saputra H. (2016) which says that HOTS is an ability to associate, interpret, and transform existing knowledge/experience in order to be able to think critically, think creatively in an effort to draw conclusions, and solve problems in actual conditions. Moreover, what characterizes HOTS lies in the ability to think. The main objective of HOTS is to improve students' thinking skills at a higher level and are related to the ability to receive various information, solve problems, and make decisions in complex situations in everyday life. Tt can be concluded that HOTS is not an easy and simple thinking concept but a complex thinking. HOTS does not only lie in students' critical thinking skills but also includes the question method and teaching methods. This was detailed by Sofyan, F. A. (2019) who stated that teaching methods based on HOTS included thinking skills, examples of the application of thoughts and adapted to the needs of different students.

HOTS is not only used at the elementary, middle and upper grade levels but also used at the higher education level. In fact, HOTS should always be applied to higher education considering that students in higher education are adult students who certainly have the ability to think critically and solve problems more deeply. Nurzaelani M. M. (2020) underlines that the skills of conducting research, solving problems, exploring and academic writing to obtain a bachelor's degree are closely related to HOTS which include critical, reflective, metacognitive and creative thinking. Therefore, the development and implementation of HOTS at the higher education level needs to be constantly reviewed.

One of the higher education institutions, University of Technology Yogyakarta, provides curriculum that encourages students to improve their critical thinking skills, creative thinking and problem solving. One of the courses that requires HOTS skills is the Office Automation Application (AAP) course. This is because the aim of the course is to prepare students to take the Microsoft Office Specialist (MOS) certification exam. MOS is part of industrial certification which is an added value for students as a form of other skills outside of the core competencies that students take during lectures (Gatpandan, P. H., 2017). Thus, students are not only proficient in operating MS Word but also must be able to solve problems encountered during lectures. The AAP course provides material about Microsoft Word 2019 for 1 full semester. In addition, the AAP course also equips students with basic office Word skills which in application are not only used in AAP courses but also as a learning tool for other courses related to daily and weekly assignments such as reports, papers, articles and so on. However, in practice, many students have difficulty in understanding the meaning of the questions and completing the exercises. This is due to the exercises are presented in the form of questions with an introduction to English. These exercises are actually very easy, this can be seen during observations during lectures, students only have difficulty translating the questions from English to Indonesian. However, after knowing the language translation, students quickly solve the problem. In addition, there is no change in the questions from year to year so that students can look for answers to their seniors or when these students have to repeat the AAP course, they collect questions from the previous year.

From aforementioned reason above, there is a need for developing exercises in addition to the different forms from previous years as well as exercises that can improve critical thinking skills and problem solving skills. Exercises in the form of HOTS are seen as ideal questions to apply to students, especially in the Office Automation Application course on MS Word 2019 material. The exercise items developed are HOTS-oriented practice questions requiring in-depth analysis

before executing (creating) the command questions. In Bloom's Taxonomy concept, HOTS occupies the top three ranks which include Analyze, Evaluate, and Create while the three orders below occupy the Lower-Order Thinking Skills (LOTS) category (Brookhart, 2010). In addition, HOTS according to Nitko & Brookhart as quoted in the article Pratiwi P. H. (2017) is divided into four groups, namely problem solving, decision making, critical thinking and creative thinking. Therefore, the development of HOTS-oriented MS Word 2019 practice items in the Office Automation Application course is very necessary. So this research aims to develop HOTS-oriented MS Word 2019 practice items for the Office Automation Application course.

REASERCH METHOD

This study belongs to Research and Development with ADDIE method developed by Dick and Carey as cited by Hidayat F & Nizar M.

(2021). However, in the implementation of the development research carried out, the ADDIE stages were carried out in a limited procedure consisting of the stages of analysis, design, and development. In short, the research procedures are carried out start from the analysis stage, namely the process of identifying and analyzing problems. Furthermore, the second stage is the design stage in the form of preparing test grids, drafting HOTS-oriented practice items and preparing validation instruments. The third stage is the development stage which contains practice item validation, trials and assessment of student responses. The research procedure carried out only reached the third stage while the fourth and fifth stages, namely implementation and evaluation, were not carried out because the development research was carried out only to measure the level of feasibility. The stages or research procedures can be clearly seen in the following figure.
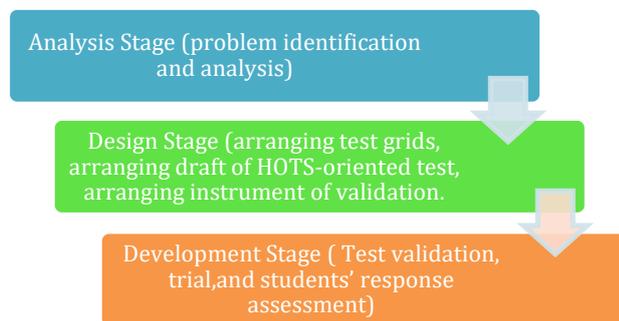
Figure 1. Research Procedure

This study involved 24 student as research subjects who enroll the Office Automation Application Course in semester 2 of the Department of Information Technology Education. There are two validators involved as material experts. The instruments used in this study were validation sheets and questionnaire sheets to measure student responses to the HOTS-oriented MS Word 2019 practice items. The HOTS-based practice items are being tested in the even semester of the 2021/2022 academic year.

The data analysis technique used in this study is a quantitative descriptive analysis technique. Data obtained from material experts and student questionnaires in the form of quantitative data are described in qualitative form. Based on the results of the validation of material experts and student questionnaires it can be seen the feasibility level of these HOTS-oriented practice questions. This study utilizesthe assessment criteria proposed by Widoyoko (2014) with the following details.

Table 1. Criteria of Assessment Scale

Category	Score	Percentage (%)
Very Feasible	4	76-100
Feasible	3	51-75
Not Feasible	2	26-50
Very unfeasible	1	0-25

RESULTS AND DISCUSSION
Findings

The development of HOTS-oriented the MS Word 2019 practice items in Office Automation Application Course has conducted through the limited ADDIE stages, namely analysis, design and development. The explanation of each stage that has been carried out is presented below.

Analysis Stage

At this stage, information was obtained that lectures for the Office Automation Application were held with practice and theory which were simultaneously carried out in the laboratory. This allows students to practice the material that has been studied directly. At this stage it was found that the existing practice items were from the MS Word 2019 companion book entitled MO-100 by Joan Lambert (2021). The form of the questions is in the form of instructions for working on steps using MS Word 2019. The level of difficulty experienced by students lies in the language used in the questions, English. After students are able to interpret the sentence in the problem, students will find it very easy to do it. Therefore, there is no significant challenge in solving the practice questions. Then, the existing practice items do not change from year to year, as a result if there are students who are repeating this AAP course or know students at the upper level, they can use the same answers.

Based on the problem analysis, the research team developed practice items with new forms that could improve critical thinking skills, creative thinking and problem solving. Thus, students are challenged to be able to complete the HOTS-oriented practice items. This practice problem is solved by explaining how to complete the steps while practicing on the computer in the laboratory.

Design Stage

At this design stage, several steps were taken to produce HOTS-oriented MS Word 2019 practice items. At the design stage of the practice questions, it is necessary to pay attention to the feasibility aspects of the practice questions so that they are used to measure student learning outcomes. The steps in this design stage consist of 4 steps. The first step is to prepare the need for practice items that refer to the learning outcomes of the Office Automation Application course. This step aims to determine how many questions will be developed and the form of the question presentation.

The second step, the preparation of question grid in accordance with the learning outcomes. The third step is the preparation of questions that originate from the questions that have been prepared previously and determine the format of the presentation of the questions.

Development Stage

The development stage as the third stage is the stage that aims to produce a product in the form of HOTS-oriented MS Word 2019 practice questions after going through a product validation and trial process. At this development stage, validation was carried out by two material experts, namely academics and practitioners. Based on the validation results from two material experts, suggestions were obtained which later became the basis for revising the practice questions. After the practice questions were revised, they then entered the testing phase for students and received direct feedback.

Validation Result

Material validation aims to get input from material experts so that it can be used as improvement material so that the resulting product can be said to be suitable for use in practice questions in the Office Automation Application Course. Material expert assessment includes aspects of content structure, learning and language aspects. The data on the results of the material expert's assessment are presented in the following table.

Tabel 2. Material Expert Assessment

Validator	Aspect		
	1	2	3
Academician	80.15	79.5	83.3
Average Score		80.9	
Category		Very feasible	
Practitioner	82.75	83.3	81.2
Average Score		82.4	
Category		Very feasible	

Based on the material expert assessment table above, it shows that the assessment of the HOTS-oriented MS Word 2019 practice items in each aspect is in a very feasible category. Thus, the HOTS-oriented MS Word 2019 practice items can be said to be feasible and can be forwarded to the next stage, trials on students.

The suggestions given by the material experts to the research team as material for improvement related to the HOTS-oriented practice items are as follows: (1) The differences in tools between 1 file and other files are given more variants to make students more challenged to complete them. (2) instructions or instructions for working on the questions need to be made clearer so that students understand more about working on the questions.

Students Response

After going through a validation process by two material experts and being deemed fit for use, the next stage is testing HOTS-oriented practice questions to students. This stage is carried out to get an assessment response from students. The process begins with giving HOTS-oriented practice questions to students, then after students have done the work, they are given a response assessment questionnaire on the practice items that have been done.

The test subjects in this study were 24 students of the Department of Information Technology Education in semester 2 of the 2021/2022 academic year. There are three aspects assessed in this trial stage: material aspects, language and benefits. Based on student assessments, the results showed that the HOTS-oriented MS Word 2019 practice items were said to be very good and feasible to use. The suggestions and input obtained by students are summarized as follows: 1) The practice items are different from the previous ones so they are more enthusiastic about working on them but are not familiar with the problem model so it is rather difficult to do them. 2) These practice items are only used on a long-term basis so that they are more enthusiastic and interested in working on the questions. The students' responses to the HOTS-oriented practice items are summarized in the following assessment data.

Tabel 3. Students Response

Aspect	Total Score	Total Percentage	Category
Material	309	80.5	Very Feasible
Language	321	83.5	Very Feasible
Benefit	333	86.7	Very Feasible

Tabel 4. Whole Student Response

Respondents	Questions	Total Score	Total Percentage	Category
24	12	956	83.6	Very Feasible

Based on the data in the table above, the average percentage of the feasibility scores of HOTS-oriented practice items is 83.3. This assessment means that these practice items are mentioned to be feasible to be used as practice items for the Office Automation Application Course.

Discussion

This study aims to develop HOTS-oriented MS Word 2019 practice items for the Office Automation Application course and test their feasibility level. The method of developing HOTS-oriented practice items is adapted from ADDIE and implemented in a limited procedure. The feasibility level of these practice questions was validated by two material experts and tested by students. Material experts assessed three aspects; content structure, learning and language aspects with an average score of 81.6 (very feasibility category).

Based on trials with students, the assessment was carried out involving 24 students of the Information Technology Education department covering 3 aspects; material aspects, language and benefits. The average score obtained is 83.6 with a very feasibility category. The results of the validation and testing of the HOTS-oriented MS Word 2019 practice items make these practice suitable to use as learning tools in the Office Automation Application course. Besides creating new and different practice questions, it is expected to make students enthusiastic about participating in lectures and to improve their critical thinking skills, creative thinking and problem solving skills. This is because the use of new and different HOTS-based practice items positively makes students feel challenged to solve these questions. Similar research is also carried out by Parmawati A. and Ruqoyyah S. (2023) that the research conducted showed that most students felt interested and had fun in responding to HOTS-based questions as a learning assessment tool.

The results of other studies that are in line with this study is research conducted by Yuliantiningrum L & Sunarti, T (2020) that HOTS questions developed for Physics subjects are used to measure critical thinking skills, creative thinking and problem solving. This research was initiated by the fact that the questions used in physics subjects were still at a low level of critical thinking. The importance of practice questions as part of the learning tool is not only to measure the level of success of learning and the achievement of the expected learning outcomes, but also to be used as a means to improve students' abilities. As stated by Yusmanto (2017) that HOTS activities can help students gain skills in seeking knowledge in reasoning to think of answers or identify or explore learning. Therefore, it is hoped that the development of HOTS-based practice items will not be utilized in certain subjects, but in a comprehensive manner. Thus, the ability of students can really be explored optimally.

In relation to the concept of Higher Order Thinking Skills from Anderson & Kartwohl (2001) cited by Wicaksono AR (2021) on the thinking dimension, HOTS thinking levels include analyzing (C4), evaluating (C5) and creating (C6). The HOTS-oriented practice items developed in this study refer to these three levels. From one question given, students are required to analyze the solution or solve the problem, evaluate the steps of the problem and be creative through practice on the computer as the end of the problem solving. Therefore, with practice questions in a new form, namely in a HOTS-oriented form, students are more challenged to solve practice items. In addition to learning assessment, related to higher-level thinking skills, HOTS is a very interesting field of study to be developed further. Not only in the learning assessment section, but also HOTS as a complete learning model can be an interesting study to develop. Moreover, it is not merely one part that uses HOTS, but the entire learning process uses HOTS as a whole. One of the studies that has

developed a HOTS-based learning model is research conducted by Imran R. F and Partikasari R. (2020). This research developed a science learning model with the HOTS concept that is valid, practical and efficient. The learning model with the HOTS concept makes students more creative and independent.

CONCLUSIONS AND RECOMMENDATION

Based on the results of the study that has been carried out to develop HOTS-oriented MS Word 2019 practice items used for the Office Automation Application course, the following conclusions are obtained. (1) The HOTS-oriented practice items were developed using the limited ADDIE method with three stages; analysis, design and development. (2) The material expert's assessment includes content, learning and language aspects, obtaining an average score of 81.6 in the very feasibility category. (3) Tests were carried out on 24 students and then questionnaire sheets were given to measure student responses which included aspects of material, language and benefits to obtain a mean score of 83.6 in the very feasible category. In conclusion, based on the assessment of material experts and student trials, it can be concluded that the HOTS-oriented MS Word 2019 practice items are very feasible and can be used in Office Automation Application course.

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