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Character-Oriented Development of Accounting Teaching Materials and Higher Order Thinking Skills (HOTS)

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Abstract

This study aims to develop HOTS-oriented assessment instruments in the form of books and guidebooks for developing HOTS-oriented teaching materials for prospective accounting teachers who are still in semester II to semester IV in the Accounting Education Study Program as well as for teachers and lecturers who teach subjects / subjects. accounting courses. This research is a research and development (R&D) which is adapted from the ADDIE development model. There are 5 stages: 1)Analysis, 2)Design, 3)Development, 4)Implementation, and 5)Evaluation. The assessment instrument developed contains three cognitive domains. covering aspects of analysis (C4), assessing/evaluating (C5) and creating/creating (C6). The results showed that the teaching materials produced were valid, practical, and effective in terms of the orientation of the teaching materials towards character and HOTS. assessment results through a character questionnaire and HOTS test. Based on the results of the assessment, the percentage of students with at least good character increased from 78% to 100% (an increase of 22%). Furthermore, based on the HOTS test results, the number of students who completed increased from 0% to 74 % (an increase of 74%).

Keywords
teaching material development; higher order thinking skill (HOTS); assessment instruments accounting students, and accountants

I. Introduction

One indicator of the success of accounting learning is the achievement of learning objectives (learning outcomes) which generally consist of cognitive, affective and psychomotor aspects. Learning objectives are a more specific form as a result of the translation of the goals of national education (Shin'an Musfiqi 2014: 45).

Problems in accounting learning generally dwell in the effort to achieve learning objectives. Thus, the vulnerable aspects indicated by problems in the accounting learning process can be categorized into two major aspects, namely cognitive and psychomotor aspects related to knowledge and skills competencies, and second, affective aspects related to attitude and character competences.

Indication of accounting learning problems can be assessed through observing the symptoms in the field. Based on the results of research conducted by previous researchers, it is concluded that 68% of accounting education students still experience difficulties in solving accounting cases. The average student still scores C out of the total 242 accounting education students. This requires an understanding of the material and accounting cases that are needed as a framework for solving problems in different situations and conditions (Mariati, 2017: 42).

Another problem, at a practical level, based on the results of research conducted by researchers in 2017, it was concluded that the learning activities carried out by lecturers had not fully emphasized the use of higher-order thinking skills in learning. Not all accounting learning objectives have been accommodated in planning, implementation, and evaluation

using high-level skills (HOTS). Meanwhile, based on the observations made on the accounting questions tested on students, 62% (of the eight subjects tested from semester I to semester IV) had not fully used the character questions in the C4 to C6 domains according to the cognitive domain. As a result, students' thinking abilities are not fully directed at a higher level of thinking skills, including the ability to think critically and creatively in solving problems.

The second problem is related to attitude and character competence. Lickona (1991: 53) explains that a character is formed from three components consisting of moral knowing, moral feeling, and moral action. The three components support each other in forming human character. Meanwhile, there are many phenomena that show the lack of character of students. For example, there are still students who cheat during exams, such as cheating on a friend's work or looking at the small notes (kopekan) they have prepared before the exam and lack of confidence in solving exam questions.

Based on the description of the two main problems above, innovation is needed to develop character-oriented learning and HOTS. Among the teaching materials developed to form high-level thinking skills of students with HOTS characters are teaching materials in the form of HOTS-oriented assessment instrument text in the form of books and guidebooks for developing teaching materials oriented towards HOTS characters.

II. Review of Literatures

2.1 Development of Teaching Materials

Teaching materials include at least four elements, namely (1) the content / subject matter, (2) the media used, (3) structured to help students learn and achieve learning objectives, and (4) the existence of instructions for use (Dick, Carey, & Carey, 2001: 245). Instructions for use can be in the form of a Semester implementation plan (RPS) to provide guidance for teachers in using teaching materials. This is closely related to the appropriate learning methods or strategies for using teaching materials. Thus, it is clear that in preparing teaching materials, in addition to preparing subject matter, we also need to choose the right media and appropriate learning strategies (Mariati, 2016: 14). Rangkuti et al (2020) stated that development of teaching materials is used as a way to identify, develop, and evaluate learning content and strategies. Development of teaching materials as an understanding of learning design. In addition, the development of teaching materials considers the nature of teaching materials, the number of students, and the availability of material.

2.2 Assessment Instruments

In the assessment activity, the teacher collects data by means of various measurements to monitor the process, progress, development of student learning outcomes in accordance with their potential, knowledge, attitudes, and skills that are expected to be achieved through continuous learning. Assessment can also provide feedback to the teacher in order to improve the planning and learning process to assess, process, progress, and learning outcomes of students.

2.3 High Order Thinking Skill / HOTS

Thinking skills are a combination of two words that have different meanings, namely thinking and skills. Thinking is a cognitive process, namely knowing, remembering, and perceiving, while the meaning of skills, namely the act of collecting and selecting information, analyzing, drawing conclusions, ideas, solving problems, evaluating choices, making decisions and reflecting (Wilson, 2000). Gunawan (2003: 171) explained that Higher

Order Thinking Skill (HOTS) is a thought process that requires students to manipulate existing information and ideas in certain ways that give them new understandings and implications. For example, when students combine facts and ideas in the process of synthesizing, generalizing, explaining, hypothesizing and analyzing, students arrive at a conclusion. Rosnawati (2013: 3) explains that high-order thinking skills can occur when someone associates newly received information with information that is already stored in their memory, then connects and / or rearranges and develops that information so that a goal or a solution is achieved a situation that is difficult to solve.

2.4 HOTS Characteristics

Higher order thinking skills known in common language as Higher Order Thinking Skills (HOTS) are triggered by four conditions. (Afandi & Sajidah 2017: 5)

a. A particular learning situation that requires specific learning strategies and cannot be used in other learning situations.
b. Intelligence is no longer seen as an immutable ability, but rather a unity of knowledge that is influenced by various factors consisting of the learning environment, strategies and awareness in learning.
c. Understanding views that have shifted from unidimensional, linear, hierarchical or spiral towards understanding views to multidimensional and interactive.
d. More specific higher-order thinking skills such as reasoning, analytical skills, problem solving, and critical and creative thinking skills.

2.5 Character Development

The process of character formation is how students are given knowledge and understanding of universal goodness values (moral knowing) so that in the end they form beliefs. These children not only have an understanding, but the existing education system must also play an active role in supporting and conditioning these good values so that all children love these values as a virtue to be embraced (moral feeling). After forming understanding and attitudes, the children will fully consciously act with the values of goodness (moral behavior) which are embraced as an expression of dignity and self-esteem.

III. Research Methods

This research was conducted at FKIP-UMSU Accounting Education Study Program which will be carried out from February 2020 to September 2020.

The development of character-based and HOTS-based assessment instruments is included in the type of research and development research or research and development. This research will produce a product in the form of HOTS-oriented assessment instruments in the form of books and guidebooks for developing teaching materials oriented to HOTS characters.

Research subjects are as follows:

a. The subjects in this study were students of the second semester of the accounting education study program at FKIP UMSU.
b. The validator consists of two experts, namely material experts, in this case the lecturer who teaches service company accounting courses and trading company accounting as well as experts in the design and development of learning evaluation, in this case the lecturer who teaches the taxonomic level of bloom.

The research steps can be seen in the following fishbone:

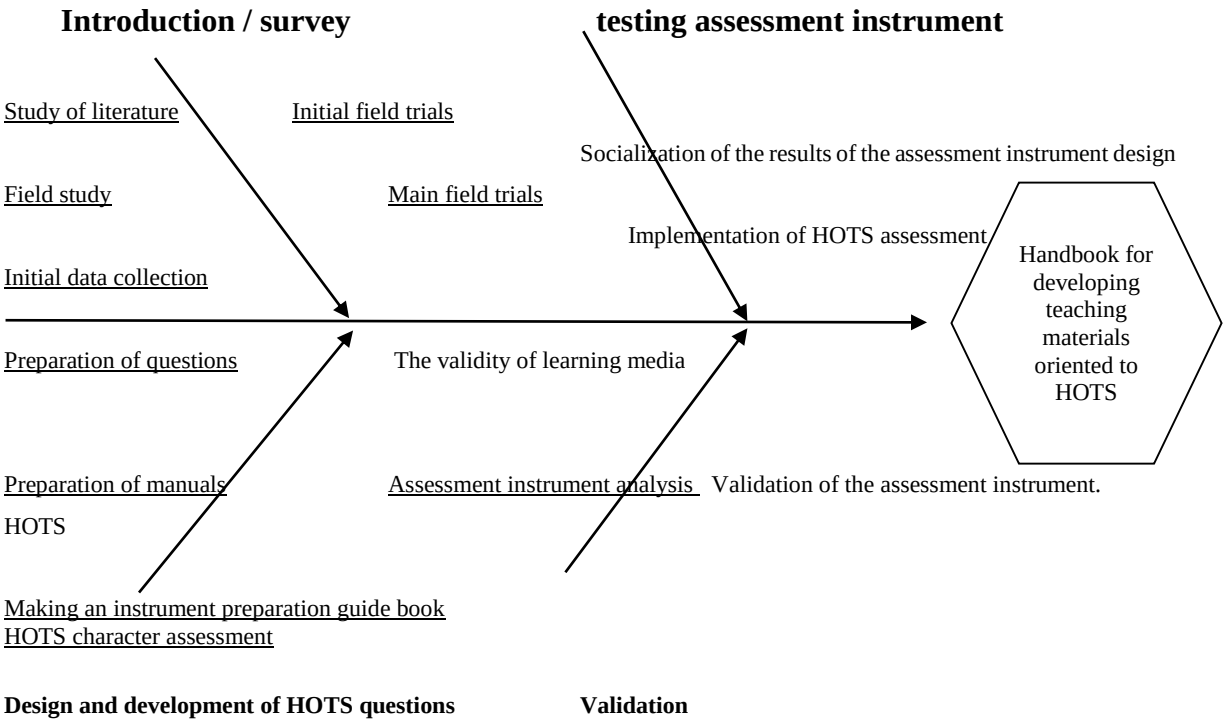

Figure 1. *Research Flowchart*

Based on the research flowchart above, the stages of research carried out are adapted from the learning development model developed by Dick and Carey (2001), which includes three stages:

a. The Preliminary Stage
   The researcher conducts a literature study to collect various information needed in conducting theoretical studies related to HOTS and the learning tools to be developed, analyzes the context and problems faced by teachers/lecturers and students related to general accounting problems at material for service companies and trading companies as well as compiling a work plan to conduct this research to make it more directed and systematic.
b. The Manufacturing Stage (Product Design)
   At this stage the researcher compiles a learning tool in the form of a question instrument (test), then determines the strategy for the preparation of a test instrument based on the cognitive domain of the analysis level (C4), Synthesis (C5) and Evaluation (C6) according to the HOTS character set, followed by developing a media instrument.
c. The Development and Evaluation Stages
   It is carried out in several stages which include; (1) the instrument preparation stage to measure the validity level of the draft question instrument with HOTS character that has been produced, (2) the trial process stage in this case involves an expert validator of material and learning content with the aim of obtaining input about the validity of the contents of the question instrument design developed , then continued with (3) the instructional trial stage, en the questions for small groups in this case represented six (6) students who were randomly assigned and had passed basic accounting courses, then (4) the large group trial stage which is carried out on twenty (20) students representing the second semester in the accounting education program FKIP-UMSU.

The character questionnaire consists of 20 items grouped based on three character components, namely moral knowing, moral feeling, and moral action. UTo test the validity level of the research instrument, the technique was carried out by providing a questionnaire to the validator of the assessment instrument (test) and the questionnaire validator. Testing the validity of the research instrument using a questionnaire sheet in the form of a checklist sheet with a Likert scale (scale 5) with alternative answers to the questionnaire.They are not suitable (value 1), not suitable (score 2), quite suitable (value 3), suitable (value 4), and very suitable (value 5).

Table 1. Character Questionnaire Grid

Indicator	Sub indicators	No. Item Questions	total
Moral knowing	Moral Awareness	1,2,3	3
	Knowledge Moral values	4.5	2
	Moral Reasoning	6,7	2
Moral feeling	Conscience	8.9	2
	Kindness Love	10.11	2
Moral action	Competence	12, 13,14	3
	Moral Desire	15,16,17	3
	Habit	18,19,20	3
	total		**20**

3.1 Data Collection Technique

The data collection technique used in this study was to provide HOTS test trials and character questionnaires to research subjects to be filled in twice, namely the initial measurement as a trial conducted on small groups and the final measurement after testing to large groups.

3.2 Data Analysis Technique

The data analysis technique used in this research is based on qualitative and quantitative data.

a. Qualitative data; in the form of suggestions/input given by material expert lecturers and assessment instrument design experts and students who were analyzed descriptively.
b. Quantitative data; obtained from the assessment questionnaire given by the two material experts and assessment instrument design as well as students who were analyzed through the following steps;
   1. Convert qualitative data becomes quantitative into five levels of validity criteria adapted from Azwar (2013: 149) covering; 1) very valid, 2) valid, 3) quite valid, 4) less valid, 5) invalid.

Table 2. Interval Data Conversion Based on the Validity Criteria

Score	Score Interval	Category
1	$\overline{Xt}$ +1.80 Sbi <X	Very valid
2	$\overline{Xt}$ + 0.60 Sbi <X ≤ $\overline{Xt}$ + 1.80 Sbi	valid
3	$\overline{Xt}$ - 0.60 Sbi <X ≤ $\overline{Xt}$ + 0.60 Sbi	Quite valid
4	$\overline{Xt}$ -1.80 Sbi <X ≤ $\overline{Xt}$ - 0.60 Sbi	Less valid
5	X ≤$\overline{Xt}$-1.80 Sbi	Invalid

Based on Table 2, the interval used to determine the criteria for the validity of the test instrument depends on the maximum and minimum scores.

2. The effectiveness of teaching materials in this study is viewed from two aspects, namely character and HOTS. Judging from the character aspect, the effectiveness of teaching materials is measured by comparing the results of the initial and final measurements of characters in large group trials. The scores obtained from filling out the character questionnaire are converted into five character categories using the formula in table-3, namely 1) very good, 2) good, 3) quite good, 4) poor, and 5) not good.
3. The next step is to calculate the percentage of students who are in each character category. Teaching materials are said to be effective if at the final measurement, the percentage of students who complete is at least 65%. A student is said to have completed a score of more than or equal to the minimum completeness criteria (KKM). KKM for service company accounting material and trading company accounting which is set in accordance with the assessment standards set by UMSU, namely Good (B) with a score of 70.Thus, at the end of the trial it is expected that the percentage of students who get test scores is more than or equal to a score of 80 minimum 70%.
4. Further analysis can be done by categorizing student characters based on character components and also based on character indicators based on the number of questionnaire items in each component or indicator.

IV. Results and Discussion

4.1 Research Results

The results of the development in this study were teaching materials in the form of manuals for developing teaching materials oriented to character and HOTS. The resulting teaching materials are in the form of assessment instruments in the form of basic accounting cases for service and trade companies for students in the second semester as well as a question book containing an assessment instrument with HOTS characteristics. The assessment instruments and guidebooks intended in this study have special characteristics, namely character-oriented and HOTS.

In general, the development of character-oriented and HOTS accounting teaching materials developed in this study is shown by activities that encourage students to be actively involved in solving a problem or facing a situation critically and creatively. Among them are activities to identify and link relevant information, investigate the truth of a statement, make assumptions, and construct ideas to solve problems. The product developed is then evaluated to determine the level of validity, effectiveness and practicality of the question instrument being developed. The level of validity of teaching materials is measured from the results of the assessment by two experts, namely accounting education experts, in this case it involves two accounting education lecturers at FKIP UMSU, namely Dra. Ijah Mulyani Sihotang, M.Si as the 1st appraiser and Dra. Fatmawarni, MM as an appraiser 2.

Table 3. Results of Expert Assessment of the Assessment Instrument

No.	Aspect	Average value	Percentage	Criteria
1	The aspect of material conformity with the RPS	13	87%	Very valid
2	The construction aspect of the question	15	75%	valid
3	Linguistic aspect	51	78%	valid
Percentage Average		**90**	**78%**	**valid**

Table 4. Expert's Assessment Results on a Character Questionnaire

No.	Aspect	Average value	Percentage	Criteria
1	Moral *Knowing*	35	88%	Very Worth it
2	Moral *Feeling*	44	88%	Very Worth it
3	Moral *Action*	17	85%	Very Worth it
Percentage Average		**96**	**87%**	**Very Worth it**

Based on Tables 3 and 4 above, the resulting assessment instrument and character questionnaire are included in the very valid and very feasible criteria. One of the reasons is because the preparation of these teaching materials has been carried out based on theoretical studies and context analysis contained in the RPS for accounting and trade company accounting courses which are aligned with the material found at the vocational high school level in the business and management fields as target users. However, at the final conclusion of the assessment, all assessors stated that the teaching materials still needed revision based on the suggestions and input provided. Analysis of the level of validity on each item showed that of the forty (40) items being assessed, four (4) of which are declared invalid and thirty six (36) of the other items are declared valid, while the character questionnaire that is declared valid is seventeen (17) items and three (3) items that are invalid. Some notes that can be summarized in these findings include (1) the writing system needs to be improved, (2) it is necessary to pay attention to the complexity of the presentation of the material and activities in the question instruments, including the introduction of new terms and the formulation of conclusions, (3) HOTS orientation in the item questions needs to be sharpened, including questions that can encourage students to think creatively in solving problems so that steps that are too guiding can be reduced, and (4) character orientation in the questionnaire still needs to be readjusted to the urgency of the character developed for students. Based on this explanation, it can be concluded that in general the teaching materials have met the very valid criteria and are suitable for use. Some findings and input from experts are used as evaluation material for the next development process. Measurement of the practicality of teaching materials is carried out in two stages, namely in limited trials and field trials. The limited trial involved six students who were randomly selected. The limited trial was carried out in two sessions, namely the test readability of the questions and the test to answer the questions. Readability testing was carried out by sending questions to students through the mailing list of students as testees and prospective accounting teachers. Furthermore, students are asked to fill out a questionnaire to assess whether each item given has an attractive appearance, easy to read writing, and sentences that are easy to understand. In addition to filling out the questionnaire, students were asked to write down the information in the questionnaire which items were difficult to understand in terms of terms, sentence structure used and answer choices that were difficult to determine. The legibility test results showed that 100% of students stated that the appearance of each question given was interesting and the writing was easy to read. Furthermore, in terms of language and sentence structure, student responses vary widely. Six (4) students complained about the difficulty of understanding sentences in several questions, four (4) students stated that it was difficult to determine the correct choice of answers from several questions that had to be answered. Of the forty (40) items that must be completed, thirty-two (32) of them are stated to be easily understood by all students, whereas in the other eight (8) items are difficult to understand quickly. Among the factors that caused this were (1) some students encountered new or unfamiliar terms, (2) there were unclear instructions in the steps to answer questions or solve problems. With these findings, researchers as developers need to re-examine each item carefully and add an explanation of terms that may be relatively new to some students. After

the test trials were completed in small groups, students were asked to fill out a character questionnaire to test their honesty in answering questions according to the moral knowing, moral feeling and moral action characters. The results of the test trials on this small group showed that both the question instruments and the character questionnaire were within practical criteria. Based on the results of these limited trials, the teaching materials developed have met the good practical criteria. However, the practicality of the product can still be improved. Therefore, the teaching materials were then revised based on several field notes and tried again at the large group trial stage to improve the practicality of the teaching materials. The trial in a large group involved 20 students. As in trials in small groups, the practicality of teaching materials in large group trials was also carried out with the same pattern. The results of the analysis showed that the students gave an assessment of the question instruments into very practical criteria. When compared with the results of small group trials, the scores given by students have increased. The results of the student assessment of the practicality of the questions showed that among the three assessment indicators, expert lecturers gave perfect scores (5: very good) on three indicators, namely (1) the suitability of the material with the RPS, (2) clarity of question construction based on cognitive levels, and (3) ease of understanding languages. This means that in developing the assessment instrument, accuracy is needed in regulating the aspects of the verb based on the needs of the questions in accordance with the level of the cognitive domain being developed. The arrangement of the verb is also related to the students' diverse abilities in completing the given task. Furthermore, the lecturers' assessment of the character questionnaire showed almost the same results. Among the three indicators of character questionnaire assessment, the validator gives a perfect score on two indicators, namely: (1) moral knowing aspect which includes moral awareness, knowledge of moral values and moral reasoning and (2) aspect of moral feeling which includes conscience and love of kindness. One other indicator scored 4 (good), namely the indicator of moral action which includes competence, moral desires and habits. The reason for giving a score of 4 can indeed be predicted beforehand, namely because it is not easy to change someone's habits so that they want to complete each task in a good way, especially if many students are accustomed to learning by depending on objects (cheat sheet) and depending on other people's answers, Moreover, the questions faced are in the form of multiple choices which are random and random if someone is stuck to analyzing the question request with the available answer choices. The solutions that can be taken include using questions in the form of subjective tests. However, given the limited time, and meeting conditions to directly observe students' ability to answer questions properly was not possible due to the Covid-19 pandemic, so it was decided to use only objective questions. For teachers who are not accustomed to using the objective test form in testing students 'abilities in class, the results of developing this objective form of questions can be used as an alternative to make it easier to identify students' abilities and character in answering HOTS-shaped questions. The final criterion that must be met by a teaching material is effectiveness. Evaluation of the effectiveness of teaching materials is carried out based on the results of field trials. The effectiveness of teaching materials in this study is viewed from two aspects, namely character and higher order thinking skills (HOTS). Measurement of the effectiveness of teaching materials from the character aspect is carried out by comparing the results of the initial and final character measurements in field trials. The results are shown in Table-6. Measurement of the effectiveness of teaching materials from the character aspect is carried out by comparing the results of the initial and final character measurements in field trials.

Table 5. Student Character Measurement Results

Character Categories	Early		End	
	Lots college student	%	Lots student	%
Very good	7	35	10	50
Good	8	40	10	50
Pretty good	5	25	0	0
Not good	0	0	0	0
Bad	0	0	0	0
Total	**20**	**100**	**20**	**100**

Based on Table 5, the percentage of students with at least good character (good and very good) at the initial measurement was 75%, while at the final measurement it rose to 100%. That is, in terms of character aspects, the teaching materials developed can be declared effective. The increase of 25% (5 students) is the research target of 13% (3 students). This increase is supported by several factors, including the initial conditions and learning design factors. First, the factor of the condition of the students' initial character (initial measurement) which is already good enough so that it has great potential to be improved and relatively easy to direct. Second, during the trial, students were directly involved in providing input in determining the questions that were considered difficult to understand between the question commands and the answer choices. This is in accordance with the opinion of Dimermen (2009; 70) which states that the best way to cultivate and understand (values) character in a person is through direct experience. Judging from the character components, there is an increase in moral knowing, moral feeling, and moral action. Most students were in the very good category on the moral knowing and moral feeling components, while in the moral action component, the good category was the most dominant. This happens in the initial and final measurements. These findings reinforce the evidence that character building requires habituation (in this context it is defined as moral action), in accordance with Hutcheon's (1999: 98) opinion. When viewed from each measured character indicator, namely moral awareness and a sense of conscience, the measurement results show an increase. The number of students with at least good character in moral awareness increased by 13%, from 87% to 100%, while in the indicator of conscience, the increase was 22%, from 78% to 100%. This increase can be explained for reasons that are almost the same as those mentioned in the previous discussion, namely students are actively involved in providing information on questions that are still considered difficult to understand and provide information through a questionnaire as to what their ability is to show their true character when faced in solving problems when tested. The next data exposure will show the increase that occurs when viewed from the classical character score average.

Table 6. Classical Character of Each Component in Initial Measurement and End

Component Character	Early		End	
	Average Score	Category	Average Score	Category
Moral knowing	79	Very good	84	Very good
Moral feeling	71	Good	78	Very good
Moral action	112	Good	117	Good
Whole	262	Good	279	Very good

Table 6 shows the data that classically there is an increase in the character score of each component. Before using teaching materials, the character of students was included in the good category with an average score of 262. After using teaching materials, the average increased 6% to 279 so that it was included in the very good category. Furthermore, the largest increase occurred in the moral feeling component, which was 9% from the good to very good category. Meanwhile, the moral components of knowing and moral action both increased by 6%. Apart from the results of filling out the questionnaire, other evidence of the effectiveness of teaching materials in terms of character aspects appears in the student result data during the trial process. The scores from the questionnaire results were then transformed into five character categories, namely not good, not good, good enough, good, and very good. The results of filling out the questionnaire show that 100% of students have good or very good characters. This result is even better than the results of filling out the questionnaire even though the activities carried out are still very limited.

Based on some of the evidence that has been described, it can be concluded that in terms of character aspects, the development product has met the criteria of being effective as teaching materials. The effectiveness of teaching materials is also viewed from the aspect of higher order thinking skills (HOTS). The effectiveness of teaching materials is measured by utilizing HOTS test result data which includes initial and final trials.

Table 7. Results of Descriptive Analysis of Early Trials and Final Test of HOTS Questions

Description	***early***	***end***
Average	32	83
The highest score	50	97
Lowest score	14	74
Standard Deviation	11	7
Many students completed	0	17
Many students do not complete	23	6
Percentage of students who completed	0%	74%

Based on Table 7, the percentage of students who completed the posttest was 74%, while at the pretest it was only 0%. This means, in terms of HOTS aspects, the teaching materials developed have met the criteria of being effective. Further analysis of the effectiveness can be carried out on the absorption of students on each indicator, both HOTS indicator and competency achievement indicator.

Table 8. Student Absorption Based on HOTS Indicators HOTS indicator

HOTS indicator	**Power Absorb**	
	early	***end***
Identify and link relevant data / information from situation or problem	20%	72%
Make the right conclusions from a set of data / information	36%	81%
Assess the quality / accuracy of a statement or argument	39%	80%
Detect consistency and inconsistencies in a process / product accompanied by evidence	46%	78%
Construct ideas / strategies and use it to solve problems	19%	84%
Developing conjectures and alternatives new in solving problems	39%	92%

Based on Table 8, student absorption increases in each HOTS indicator. Based on the evaluation carried out, several findings were found, including (1) the ability of students to link information to the questions given still needs to be improved, one of the causes of this problem is that students feel confused when the concept is applied to different contexts, (2) errors that occur in generally it is because students are not careful in finding inconsistencies in a given situation, (3) the ability of students to solve problems increases rapidly after students use the teaching materials developed, this is because students have been trained in solving various problems presented in multiple choice questions. In learning, students are accustomed to constructing ideas to solve problems through the process of information analysis and group discussions. Second, when viewed from the indicators of achieving basic competencies, student absorption of all indicators has also increased.

Thus, it can be concluded that in general students are able to master the expected competencies. Based on this description, it can be concluded that in terms of the aspect of higher order thinking skills (HOTS), the teaching materials developed have met the criteria for being effective. Evidence of effectiveness is the completeness of classical HOTS test results reaching 74%. However, various field notes show that product development still has the potential to be improved through various improvements. Revisions were made to the assessment instrument in the form of a subjective test based on the evaluation results at each stage of the trial.

Based on the results of formative evaluations and revisions that have been made, the final product of teaching materials has met the criteria of validity, practicality, and effectiveness. The validity of the developed teaching materials is determined from the results of the assessment by the relevant experts. The experts referred to in this study are experts in accounting education and character experts. Based on the results of this assessment, it can be concluded that both the teaching materials resulting from the development of an assessment instrument based on character and HOTS are included in very valid criteria. The practicality of the teaching materials is proven by the results of filling out questionnaires by lecturers and students. Based on the analysis of the data obtained, it was found that the teaching materials developed, both questions and character questionnaires, were included in the very practical criteria. The effectiveness of the developed teaching materials is viewed from two aspects, namely character and HOTS. Teaching materials developed are declared effective if after using the developed teaching materials, the percentage of students who have at least good character (B) increases by at least 13% between the initial and final measurements, and the percentage of students who complete the HOTS test is at least 70%. Based on the results of data analysis, it was found that the percentage of students who had a minimum good character increased by 22%, from 78% in the initial measurement to 100% in the final measurement, while the percentage of students who completed the HOTS test was 74%. Thus, the teaching materials developed were declared effective in terms of character and HOTS.

V. Conclusion

1. Teaching materials in the form of HOTS character question instruments for service and trade company accounting for second semester students in the form of a collection of objective questions included in very valid criteria,
2. Teaching materials in the form of HOTS character question instruments for accounting and trade service companies for second semester students in the form of a collection of objective questions including very practical, and

3. Instructional materials for HOTS character question instruments for service and trade company accounting for second semester students in the form of a collection of objective questions included in the effective criteria for improving character and higher order thinking skills (HOTS)

References

Azhar Arsyad. (2011). *Media Pembelajaran*. Jakarta: PT Raja Grafindo Persada

Deni Hardianto. (2005). Media Pendidikan sebagai Sarana Pembelajaran yang Efektif. *Majalah Ilmiah Pembelajaran* 1, Vol. 1. Hlm 95-104

Gunawan, A. W. (2003). *Genius Learning Strategy*: Petunjuk Praktis untuk Menerapkan *Accelerated Learning*. Jakarta: Gramedia Pustaka Utama.

Kemendikbud. (2017). Modul Penyusunan Soal *Highere Order Thinking Skill (HOTS)*. Jakarta: Direktorat Pembinaan SMA Ditjen Pendidikan Dasar dan Menengah.

Kemendikbud. (2017). *Panduan Implementasi Kecakapan Abad 21 Kurikulum 2013 di Sekolah Menengah Atas*. Jakarta: Direktorat Pembinaan SMA Ditjen Pendidikan Dasar dan Menengah

Lickona, T. (1991). *Education for character: How our schools can teach respect and responbility.* New York: Bantam Books

Lukman & Ishartiwi. (2014). Pengembangan Bahan Ajar dengan Model *Mind Map* untuk Pembelajaran Ilmu Pengetahuan Sosial SMP. *Jurnal Inovasi Teknologi Pendidikan.* (Vol. 1. No. 2. Hlm 112). http://journal.uny.ac.id/index.php/jitp/article/view/2523, yang diakses pada 16 Oktober 2016 pukul 8.08 WIB

Rangkuti, N.J., et al. (2020). The Development of Fantasy Teaching Materials by Using VAK (Visual Auditory Kinesthetic) on 7th Grade Students in SMP Negeri 1 Medan. udapest International Research and Critics in Linguistics and Education (BirLE) Journal. P. 1170-1181

Rohmi Julia Purbasari. (2012). Pengembangan aplikasi Android sebagai Media Pembelajaran Akuntansi pada Materi Dimensi Tiga untuk Siswa SMA kelas X. *Jurnal Pendidikan Akuntansi.* (Vol 1. No 2. Hlm 3-11. http://jurnal-online.um.ac.id/article/do/detail-article/1/31/932, diakses pada tanggal 16 Oktober 2016 pukul 17.32 WIB

Rosnawati, R. (19 Nopember 2012). *Enam Tahapan Aktifitas dalam Pembelajaran Matematika untuk Memberdayagunakan Berfikir Tingkat Tinggi Siswa* (Makalah). Diakses tanggal 15 Mei 2020 dari http://staff.uny.ac.id

Setyono, Sukarmin dan Wahyuningsih. (2013). Pengembangan Media Pembelajaran Fisika Berupa Bulletin Dalam Bentuk Buku Saku Untuk Pembelajaran Fisika Kelas VIII Materi Gaya Ditinjau Dari Minat Baca Siswa. *Jurnal Materi dan Pembelajaran Fisika*. Universitas Sebelas Maret. (Vol 1. No. 1 hlm 118).

Shin'an Musfiqi dan Jailani. (2014). Pengembangan Bahan Ajar Matematika yang Berorientasi pada Karakter dan *Higher Order Thinking Skill* (HOTS). PYTHAGORAS:*Jurnal Pendidikan Matematika.* (Vol 9. No. 1. Hlm 45-59). Available online at: http://journal.uny.ac.id/index.php/pythagoras, diakses pada tanggal 20 April 2020 pukul 22.15 WIB.

Sugeng Purwantoro, Heni Rahmawati, dan Achmad Tharmizi. (2013). Mobile Searching Objek Wisata Pekanbaru Menggunakan Location Base Service (LBS) Berbasis Android. *Jurnal*. Politeknik Caltex Riau. (Vol 1 hlm 177).

http://www.pdii.lipi.go.id/wp-content/uploads/2014/03/Seminar-NasionalInfonnatika-_SNlf-2013. Diakses pada 22 Oktober 2016 pukul 22.17

Weksi Budiaji. (2013). Skala Pengukuran dan Jumlah Respon Skala Likert. *Jurnal Ilmu Pertanian dan Perikanan.* Fakultas Pertanian Untirta (Vol. 2 No.2 hlm 126). http://umbidharma.org/jipp. Diakses pada 14 Oktober 2016 pukul 20.45.

Zohar, A., & Dori, Y.J. (2003). Higher order thinking skills and low achieving students: Are they mutually exclusive. *The Journal of The Learning Sciences* , (12), pp.145-181