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Quality Analysis Of Hots-Based Multiple Choice Questions On Government Accounting Elements Phase F Using Anates Software

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Abstract
This study was conducted with the primary objective of evaluating the quality of Higher Order Thinking Skills (HOTS) multiple-choice questions developed for the Government/Institutional Accounting material for students in Phase F. The Anates application was used as the main tool in the analysis process. This quality evaluation was carried out to determine the extent to which the test items are feasible and effective as assessment instruments. The key quality indicators analyzed include validity, reliability, difficulty level, discrimination power, and distractor effectiveness.The research employed a quantitative approach using documentation methods and a survey design. The study will be conducted in a selected Vocational High School (SMK), involving Accounting Phase F students as participants. Data were collected througa set of 54 multiple-choice questions focusing on elements of Government/Institutional Accounting.The findings of this analysis are expected to provide valuable insights for the continuous improvement of test item quality and the learning outcome evaluation process in accounting education. This research is also expected to assist educators in developing assessment instruments that are more valid, reliable, and aligned with learning needs that require higher-order thinking skills.

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1. INTRODUCTION

Assessment instruments are essential elements used by educators to measure students' achievement and understanding of the material. Assessment can be implemented through various techniques, including testing (such as oral, written, and practical tests) and non-testing techniques (through observation, interviews, or questionnaires). In the written test category, assessment instruments are generally divided into two formats: objective (e.g., multiple-choice, matching, or true-false) and subjective (e.g., essays). Multiple-choice questions, as an objective format, provide pre-prepared answer options.

In the contemporary educational context, item analysis is crucial for teachers and teaching staff to ensure that the instruments used meet high-quality standards. With the advancement of technology, the use of software such as Anates has become an effective solution for conducting item analysis accurately and efficiently. The Anates application, specifically designed for analyzing multiple-choice items, helps educators evaluate crucial parameters such as validity, reliability, difficulty level, discrimination power, and distractor quality.

The function of item analysis is not limited to determining students' levels of understanding, but also plays a crucial role in improving the quality of the teaching process provided by instructors. Through systematic analysis, items can be classified as good, average, or poor, ultimately allowing for continuous improvement in evaluation and teaching activities.

The specific focus of this research is the analysis of test items. *Higher Order Thinking Skills* (HOTS) on the Accounting Element of Government Institutions/Agencies for Phase F level. HOTS questions inherently demand higher critical thinking and problem-solving skills from students, thus requiring a quality-tested instrument. This study aims to test and validate the design of the test instrument so that it can accurately reflect the mastery of complex concepts by students. In short, this study attempts to analyze each HOTS multiple-choice question item to assess students' competency in the material, while simultaneously determining the factors that influence its reliability and validity by utilizing the Anates Program.

2. RESEARCH METHODS

This item analysis was conducted with the aim of assessing the feasibility and quality of HOTS multiple-choice questions on the Accounting Elements of Government Institutions/Agencies Phase F material. This evaluation is expected to improve the quality of the test instrument to make it more acceptable for students. In addition, this study aims to identify question items that have not met the test feasibility criteria so that they can be followed up, either through revision or replacement, if the analysis results indicate that the questions are not feasible. This research is categorized as quantitative research using a survey approach and documentation data collection methods. The research was conducted in several Vocational High Schools (SMK) located in Surabaya and Sidoarjo. Data collection is scheduled for October 21, 2025. The research subjects included 20 students from the Phase F class (equivalent to grade XI/XII) majoring in accounting.

Data were collected through a written test consisting of 54 multiple-choice questions. These questions were developed based on the Accounting Elements of Government Institutions/Agencies Phase F material and were specifically designed as HOTS (Hots) questions. *Higher Order Thinking Skills)* The test was conducted online using the Google Forms platform. The results of data collection were in the form of raw data of responses or answers given by students to each question. Student answers were classified into two groups: the superior group (top), consisting of students with the highest correct answer scores, and the inferior group (bottom), consisting of students with the lowest scores. Although the general percentage often used to determine the superior and inferior groups is 27% of the total subjects, this percentage will be adjusted proportionally to the total number of research subjects (20 students). Next, this data will be further processed using the Anates application (as explained in the previous section) to test the validity, reliability, level of difficulty, discriminating power, and quality of the distractors. Finally, conclusions can be drawn that can be used as evaluation material.

3. RESULTS AND DISCUSSION

The variables in this study include values in terms of validity, reliability, difficulty level, correlation, discriminatory power, and quality of each item tested. Table 1 shows the results of the discriminatory power analysis using ANOVA software.

Table 1. Results of Distinguishing Power Analysis

Question Category	Index	Number of Questions
Not good	0,00-0,20	3
Low	0,20-0,40	6
Pretty good	0,40-0,70	3
Good	0,70-0,90	19
Very good	0,90-1,00	13

Source: Processed data (2025)

Based on the results of the discriminatory power analysis in Table 1, it can be seen that the majority of questions fall between the good and very good categories. Of the total items, 19 were considered good, and 13 were considered very good. This indicates that most of the questions were able to distinguish students who understood the material from those who were still struggling.

Conversely, three questions in the "poor" category, with indexes between 0.00 and 0.20, failed to differentiate student ability because the number of students in the upper and lower groups was nearly equal. Questions with this feature should be reviewed or replaced because they are not functioning properly.

Then, there are six questions that fall into the low category. Despite this, the ability to differentiate is still present. Questions like these can usually be improved by changing the wording, changing the answer choices, or increasing the question stimulus.

Despite this, the three questions in this category are quite good and can still be used due to their sufficient variety. However, some improvements are needed to improve the quality.

Overall, the discriminating power composition indicates that the test items are of high quality. Questions in the good and excellent categories indicate that most items are capable of carrying out their evaluation function, namely selecting students based on their level of mastery of the material. However, questions in the low and poor categories also require attention to improve the quality of the evaluation instrument.

Table 2. Results of Analysis of Question Difficulty Level

Question Category	Index	Number of Questions
Difficult	0,00-0,30	3
Currently	0,31-0,70	49
Easy	0,71-1,00	3

Source: Processed data (2025)

Based on the analysis of the difficulty level in Table 2, the majority of the 49 questions fall into the moderate category, indicating that the instrument used is sufficiently balanced and can more objectively describe student abilities. Questions in this category can also be answered by groups of students with basic understanding and students with higher abilities, providing a more accurate picture of the distribution of student abilities. Using this type of question composition when constructing exams is highly recommended because it can avoid errors, either too easy or too difficult, which can compromise the validity of the assessment.

Additionally, three questions fell into the difficult category with an index of 0.00–0.30. Difficult questions typically indicate higher complexity of material and presentation. However, questions that are too difficult can also indicate problems such as unclear wording, unsupportive stimuli, or material that students have not yet fully mastered. Therefore, questions in this category should be reviewed to determine whether their difficulty stems from high cognitive demands or from technical errors made in the question's construction.

In contrast, three questions were categorized as easy, with an index of 0.71–1.00. The majority of students were able to answer these simple questions correctly. While some easy questions are still necessary to create varying levels of difficulty, too many questions can make the test indiscriminate by failing to clearly identify students with high and low ability. Furthermore, easy questions can indicate that the material being tested is too simple or that the answer options are not varied enough, making it easier for students to guess.

Overall, the majority of the population in this study fell into the moderate category, and the distribution of difficulty levels could be considered quite ideal. This indicates that the questions met

the basic principle of test design, namely balance of difficulty levels. However, for the overall test to accurately measure student ability, the easy and difficult questions still need to be evaluated.

Table 3. Validity Analysis Results

Question Category	Index	Number of Questions
Very high	0,800-1,00	15
High	0,600-0,800	16
Enough	0,400-0,400	10
Low	0,200-0,400	7
Very Low	0,00-0,200	6

Source: Processed data (2025)

The validity analysis results in Table 3 indicate that the quality of the items in this study varied widely. Most items had good to very high validity, as indicated by the strong correlation between each subject's score and the total score. This is demonstrated by the fact that fifteen items fell into the very high category with an index of 0.800–1.00 and 16 items fell into the high category with an index of 0.600–0.800. All items in these two categories showed a strong correlation between students' overall ability and their performance on a specific item; thus, they can be considered capable of measuring the competencies intended to be assessed. In other words, these items functioned in the expected manner to reflect the expected learning outcomes.

Additionally, there are 10 questions that fall into the sufficient category. While these questions still have adequate validity, an examination is necessary to determine whether the metrics being measured are appropriate or whether any editorial elements need improvement. Because the relationship between item scores and the total is still within acceptable limits, categorized questions can still be used in the exam. The items' ability to demonstrate the competencies being measured can be improved through refinement. This could be done by strengthening the stimulus, clarifying the question clarity, or adjusting the cognitive level, for example.

Conversely, 7 questions fell into the low category. They failed to accurately reflect student abilities because these items showed a weak correlation between item scores and the total score. Invalidity can be caused by many factors. For example, competency indicators don't align with the question content, incorrect answer options are selected, or confusing wording that doesn't reflect students' true abilities.

Six additional questions fall into the very low category, with an index of 0.00–0.200. Because they fail to reflect the expected competencies, these questions require special attention. Very low validity likely indicates fundamental problems, both in terms of the material and the format of the questions. Therefore, components in this category are unsuitable for use and should be removed or revised entirely.

Overall, the validity results of this study indicate that most of the items meet the quality criteria. However, for the instrument as a whole to provide a more accurate picture of student abilities, several items with low validity need to be improved. Evaluation and revision of these items will help improve the instrument's quality, making the measurement results more reliable and truly reflecting student learning achievement.

Table 4. Results of Reliability Analysis

Aspect	Index
Rate- rate	29,45
Intersection	15,94
Correlation	0,95
Reliability	0,97

Source: Processed data (2025)

Based on the reliability analysis results shown in Table 4, the reliability coefficient was 0.97. This value is in the very high category and indicates that the instrument has a very good level of consistency. This means that the questions provide stable results when used to evaluate student abilities in comparable situations. High reliability indicates that differences in student scores truly reflect differences in their abilities rather than due to chance or irregular factors. Therefore, this instrument can be trusted as an accurate evaluation tool.

Furthermore, there is a strong belief that there is a very strong relationship between the overall student score and each test item, as indicated by the correlation value of 0.95. This high correlation indicates that each item aligns with the overall instrument, so that no item deviates or contradicts the measurement objectives. That the questions support each other in assessing the same competency and produce a cohesive assessment construct is indicated by the high correlation.

While the standard deviation of 15.94 indicates significant variation in scores between students, the mean score of 29.45 indicates a general tendency for students to perform well on the given instrument. This variation is beneficial because it indicates that the instrument can identify individual differences in ability. If the instrument's results were too uniform, it would indicate that the item was not sensitive enough to differentiate student abilities.

Overall, the reliability results shown in Table 4 indicate that the multiple-choice test instrument used in this study is of excellent quality. In addition to being consistent, the instrument is sensitive to differences in student ability. It is a highly reliable tool for use in research and learning evaluation without compromising its reliability. This provides a strong basis for confidence that this tool can provide consistent, accurate, and reliable results for measuring student achievement.

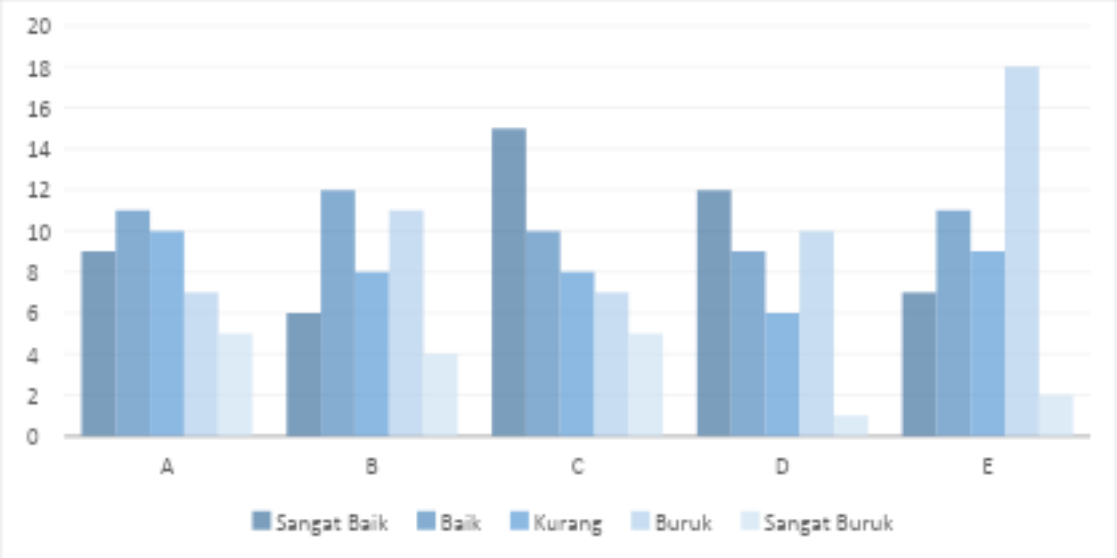

Diagram 1. Results of the Analysis of Deceptive Power
Source: Data processed 2025

Diagram 1 shows the distribution of distractor quality in each answer option (A, B, C, D, and E). The distractor quality differs for each option, as shown in the diagram, but most distractors function well. The number of distractors in the excellent and good categories is quite dominant in option A, indicating that many students who did not choose the correct option were attracted to the distractor. This condition indicates that the distractor in option A is functioning as it should, namely being able to attract students who have not yet understood the material well.

For option B, the number of distractors in the good and poor categories is fairly even, but the number of distractors in the excellent category is higher compared to the other options; this indicates that the distractors in option B are relatively effective, although some distractors are not working well and need to be reviewed. For option C, the pattern is somewhat similar, with a fairly high number of distractors in the good and poor categories. This indicates that, although there are some distractors

In option D, distractors in the good and very good categories again dominate, indicating that this option is also quite good for evaluating student abilities. However, distractors in the bad and very bad categories remain, indicating that there are some parts of the question that need improvement, especially in terms of the arrangement of answer choices. Finally, in option E, the diagram shows the distractor with the highest score in the very good category, indicating that the distractors in category D. However, the fact that many distractors are bad and very bad indicates that not all distractors work well.

Overall, most of the distractors were in the good to excellent category across the five answer options, indicating that the quality of the answer options on this test item was adequate for this study. However, poor and very poor distractors still require attention. Poor distractors are typically not selected by students, whether correctly or incorrectly, and therefore do not play any role in the ability selection process. Overall item quality can be improved by fixing problematic distractors, which can still be selected by students with a poor understanding of the material.

4. CONCLUSION

Based on the results of item analysis using the Anates program, in the accounting element of Government Institutions/Agencies Phase F, the quality of the HOTS multiple-choice instrument is generally good. Most of the questions have high discriminating power, which makes it possible to distinguish students who truly understand the material from those who are still experiencing difficulties. In addition, the difficulty level is predominantly in the medium category, indicating that the questions have been arranged proportionally and have the ability to assess students' abilities more objectively. Validity results also show that most of the items are in the high to very high category, indicating that the items are in accordance with the competencies being measured and are suitable for use as an evaluation tool.

This instrument consistently and stably measures student ability, as demonstrated by its very high reliability coefficient of 0.97. This indicates that the differences in scores are due to differences in students' actual abilities, not to irregularities in the measuring instrument. As far as distractors are concerned, most answer options function well, but some require improvement because they fail to capture students' attention.

Overall, the analyzed test instrument meets adequate quality standards and can be used to assess learning. However, to improve the instrument's quality, several invalid items, poor discriminatory power, and non-functional distractors need to be revised. It is hoped that with continued improvement, this evaluation tool will become a more accurate tool for measuring students' higher-order thinking skills, particularly in the Accounting for Government Institutions/Agencies Phase F material.

5. BIBLIOGRAPHY

Adimas, I., Saputra, G., Hakim, L., Pratiwi, V., Rohayati, S., Wahjudi, E., & Farid, M. M. (2025). *Pelatihan Analisis Butir Soal Berbasis ANATES untuk Meningkatkan Kualitas Evaluasi Pembelajaran Guru MGMP Akuntansi* (Vol. 6, Issue 3). https://madaniya.biz.id/journals/contents/article/view/1300

Agustin, L., Zahra Wildaniar Amraow, G., Hakim, L., Pratiwi, V., & Negeri Surabaya, U. (2024). *Analisis Butir Soal Pilihan Ganda pada Elemen Akuntansi Lembaga atau Instansi Pemerintah Menggunakan Program Komputer Anates* (Vol. 4, Issue 1).

Ainiyah, N. N., P, A. N. N., A, M. F. A., Hakim, L., & Pratiwi, V. (2024). *Analisis Butir Soal Pilihan Ganda Materi Lingkup Kerja Akuntansi dan Keuangan Lembaga Menggunakan Anates*. https://doi.org/10.26877/mpp.v18i2.21071

Akhmadi, M. N. (2021). *ANALISIS BUTIR SOAL EVALUASI TEMA 1 KELAS 4 SDN PLUMBUNGAN MENGGUNAKAN PROGRAM ANATES*.

Amalia, R., Yoko, Y. U., Fauziyah, L. U., Pratiwi, V., & Hakim, L. (2024). *Analisis Soal Menggunakan Anates Mata Pelajaran Spreadsheet Dikelas Smk Akuntansi Kelas 10*.

Amanda Mustika Ran, C., Nur Farida, A., Avrista, S., Hakim, L., & Pratiwi, V. (2024). Analisis Butir Soal Komputer Akuntansi Kelas XI Melalui Aplikasi Anates. In *Jurnal Nirta : Studi Inovasi* (Vol. 4, Issue 1). https://ejournal.nlc-education.or.id/

Amelia, N., Paridjo, & Sina, I. (2021). *Analisis butir soal penilaian akhir tahun mata pelajaran matematika menggunakan software anates* (Vol. 12, Issue 3).

Andrianik Susilowati, D., Saputri, N., Ni, K., Hakim, L., & Pratiwi, V. (2025). *Penerapan Aplikasi Anates Untuk Analisis Soal HOTS Dalam Evaluasi Pembelajaran Spreadsheet Di SMKN 1 Kendal* (Vol. 4, Issue 2).

Arinda Cahyani, D., Hanum Aurelia, A., Hakim, L., & Pratiwi, V. (2024). *Analisis Butir Soal HOTS Akuntansi Perusahaan Jasa Menggunakan Software Anates pada Siswa SMK Kelas 11* (Vol. 4, Issue 1).

Arlindianie, N. K., A'isyah, E. T., Rahmah, E. A., Hakim, L., & Pratiwi, V. (2024). *ANALISIS KUALITAS BUTIR SOAL AKUNTANSI PERUSAHAAN JASA, DAGANG, DAN MANUFAKTUR MENGGUNAKAN APLIKASI ANATES TERHADAP SISWA-SISWI SMK/MAK* (Vol. 4).

Diva Prayitasari, S., Jihan Nadjidah, S., Dyah Ramadhani, K., Hakim, L., Pratiwi, V., Akuntansi, P., Ekonomika dan Bisnis, F., & Kata Kunci, A. (2024). Journal of Learning and Teaching Analisis Butir Soal Pilihan Ganda Pada Elemen Job Profile Dan Peluang Usaha Di Bidang Akuntansi Dan Keuangan Lembaga Fase E Kelas X SMK Melalui Penggunaan Program Komputer ANATES. In *Journal of Learning and Teaching* (Vol. 01).

Dwiningdyah, A. L., Fariha Ulfiati, N., Annisa, N., Sabryna, M., Hakim, L., & Pratiwi, V. (2024). *Analisis Butir Soal Ujian Hasil Matapelajaran Akuntansi Keuangan Fase F Kelas XI Menggunakan Anates Versi 4.0.9*.

Ebenheser, Y. K., Setyoningrum, S. A. E., Sabrina, R. A., Pratiwi, V., & Hakim, L. (2025). Studi Kelayakan Kualitas Butir Latihan Soal HOTS Pilihan Ganda dalam Pembelajaran Praktikum Akuntansi Lembaga Pemerintahan di SMK Wijaya Putra Surabaya. *JGK (Jurnal Guru Kita)*, *9*(3), 963–972. https://doi.org/10.24114/jgk.v9i3.64381

Firandhika, A., Dwi Apriliyanti, K., Kasih Agus Saputri, A., Hakim, L., Pratiwi, V., & Negeri Surabaya, U. (2024). *Analisis Butir Soal HOTS Pilihan Ganda Pada Elemen Komputer Akuntansi Di SMKN 10 Surabaya Menggunakan Aplikasi Anates* (Vol. 4, Issue 1).

Ikhsaniyah, S. N., Kurnia, A. D., Zuroida, M., Pratiwi, V., & Hakim, L. (2024). *ANALISIS BUTIR SOAL PERPAJAKAN PPH PASAL 21 MENGGUNAKAN*.

Interdiana, A., Sari, C., & Herawati, M. (2014). APLIKASI ANATES VERSI 4 DALAM MENGANALISIS BUTIR SOAL. In *Faktor Jurnal Ilmiah Kependidikan: Vol. I* (Issue 2).

Karimullah, M. R., Andhani, B. W. A., Anwar, S., Ningtyas, M. D. A., Pratiwi, V., & Hakim, L. (2025). *Analisis Kualitas Soal Pilihan Ganda Mata Pelajaran Dasar Program Keahlian Akuntansi dan Keuangan Lembaga di SMK Triguna Bhakti Surabaya*. https://doi.org/10.18502/sjms.v15i2.5503

Masruri, F. B., Farila, F. N., Putri, M. A., Pratiwi, V., Hakim, L., Akuntansi, P., & Surabaya, U. N. (2024). *Artikel Optimasi Evaluasi Pembelajaran: Analisis Butir Soal Pilihan Ganda dengan Aplikasi Anates*.

Meilin Syafiriya, D., Ayu Rahmawati, P., Qolbi, Z., Hakim, L., Pratiwi, V., Studi Pendidikan Akuntansi, P., Ekonomika dan Bisnis Universitas Negeri Surabaya Jl Ketintang, F., Gayungan, K., Surabaya, K., & Timur, J. (2024). Analisis Butir Soal HOTS untuk Menguji Pemahaman Siswa SMK Jurusan Akuntansi Menggunakan Software Anates. In *Jurnal Nirta : Studi Inovasi* (Vol. 4, Issue 1). https://ejournal.nlc-education.or.id/

Puteri, N. D., Putricia, N. D., Arsyanti, K., Putricia, N. D., Hakim, L., & Pratiwi, V. (2025). Analisis Kelayakan Butir Soal Pada Handout Akuntansi Keuangan Dana Kas Kecil Berbasis E-Book Menggunakan Software Anates. *JIBEMA: Jurnal Ilmu Bisnis, Ekonomi, Manajemen, Dan Akuntansi*, *2*(3), 205–214. https://doi.org/10.62421/jibema.v2i3.108

Putri Asyaroh, S., Candra Febriyanti, A., C Sitanggang, C. J., & Hakim, L. (2025). *Analisis Butir Soal Hots Pada Elemen Perpajakan Fase F SMK Akuntansi Menggunakan Software Anates* (Vol. 4, Issue 2).

Putri, D. R., Anugrah, P., Lestari, A. S., Hakim, L., & Pratiwi, V. (n.d.). *ANALISIS BUTIR SOAL PERPAJAKAN KELAS XI PADA SISWA SMK MENGGUNAKAN APLIKASI ANATES*.

Putri, D., & Silvian Retnosari, D. (2024). *Analisis Kualitas Soal Penilaian Akhir Semester Mata Pelajaran Dasar Program Keahlian Akuntansi dan Keuangan Lembaga di SMK Ketintang Surabaya*.

Rachmadani, F. C., Lestari, C. D., Hakim, L., & Pratiwi, V. (2024). ANALISIS BUTIR SOAL PILIHAN GANDA PADA ELEMEN AKUNTANSI KEUANGAN GUNA MENGOPTIMASI EVALUASI MENGGUNAKAN ANATES V4.0. In *Jurnal Nirta : Studi Inovasi* (Vol. 4). https://ejournal.nlc-education.or.id/

Rahma, A., Meivia, A., Hakim, L., Pratiwi, V., Akuntansi, P., Ekonomika, F., & Bisnis, D. (2025). Journal of Learning and Teaching Analisis Butir Soal K3LH pada Tingkat SMK Menggunakan Aplikasi ANATES. In *Journal of Learning and Teaching* (Vol. 02).

Rahmawati, N., Qoiri, F. N. P., Cahyo, F. T., Hakim, L., & Pratiwi, V. (2024). *Analisis Butir Soal Hots Elemen Kesehatan Keselamatan Kerja Dan Lingkungan Hidup Untuk Menguji Pemahaman Siswa Smk Jurusan Akuntansi Keuangan Dan Lembaga Menggunakan Aplikasi Anates*.

Ramadhani, J. O. D., Kristinawati, D., Safitri, F. S. R. W., Arif, A., & Hakim, L. (2025). *ANALISIS BUTIR SOAL LINGKUP KERJA PADA BIDANG AKUNTANSI DAN KEUANGAN LEMBAGA DENGAN MENGGUNAKAN APLIKASI ANATES*.

Ropita Siregar, S. N., Luckytasari, A., Ariani, A., Hakim, L., Pratiwi, V., & Negeri Surabaya, U. (2024). *Analisis Soal Hots Pada Isu Serta Perkembangan Terkini Akuntansi Keuangan Fase E SMK Menggunakan Aplikasi Anates* (Vol. 4, Issue 1).

Sabela, O. R., Krisdayanty, D., Taqqiyah, A. Z., Hakim, L., & Pratiwi, V. (2025). Analisis Butir Soal HOTS Elemen Dokumen Berbasis Digital (FASE E) Menggunakan Program Anates. In *Education Achievment: Journal of Science and Research* (Vol. 6). http://pusdikra-publishing.com/index.php/jsr

Sabrina, N. M., Hemi, K. N. D., Hildayanti, S., Hakim, L., & Pratiwi, V. (2024). *PENERAPAN APLIKASI ANATES DALAM ANALISIS SOAL PILIHAN GANDA DI SMKN 2 TUBAN*