

The Development of An Assessment Instrument for Improving Students' Analytical Thinking Abilities

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ABSTRACT

This study addresses the low analytical thinking skills observed among accounting education students, particularly in mastering journal entry concepts. Analytical ability is a crucial component of higher-order thinking skills (HOTS), which are essential for success in accounting practice. To respond to this issue, this research aimed to develop a valid and reliable assessment instrument using the Thiagarajan four-D model (Define, Design, Develop, and Disseminate), although the process was limited to the third stage. The study employed a research and development (R&D) approach, with data collected through tests and expert validation, and analyzed using descriptive qualitative methods. The results showed that the developed instrument met the criteria of clarity, relevance, accuracy, and language quality. It also demonstrated high reliability with a Cronbach's alpha of 0.712. However, students' performance on the instrument revealed an average score of 37.66 out of 100, indicating low analytical thinking skills. The study concludes that while the instrument is feasible, further pedagogical innovation is needed to enhance student competencies.

Keyword: Analyzing Thinking; Learning outcomes; Assessment Instrument

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1. INTRODUCTION

This study aims to analyze how the development of assessment instruments can improve students' analytical thinking skills. Learning conducted online during the pandemic was generally full of challenges, both for lecturers and students. This was largely due to the sudden shift from face-to-face learning to online learning without adequate preparation.

Research by Asmuni (2020) revealed that the implementation of online learning, which was essentially distance learning during the COVID-19 pandemic, presented a range of problems for teachers, students, and parents. One of the main issues faced by teachers was a lack of mastery in information technology and limited access to monitor student activity. As a result, the learning process was far from optimal, with the teacher's role reduced to merely transferring knowledge.

In contrast, optimal learning should be able to fully support the achievement of the intended learning objectives. Learning objectives are targets to be achieved by students, and these typically include three main domains: the cognitive, affective, and psychomotor domains. According to Sujana, as cited in Tri Indra Prasetya (2012), the cognitive domain refers to intellectual learning outcomes consisting of six aspects: knowledge, comprehension, application, analysis, synthesis, and evaluation. The first two aspects are considered lower-order thinking skills, while the remaining four belong to the higher-order thinking skills (HOTS) category.

Meanwhile, according to Arifin (2012), the affective domain involves the internalization of attitudes that reflect inner growth. This occurs when students become aware of the values they receive, adopt those values, and integrate them into their behavior and decision-making.

The psychomotor domain, on the other hand, refers to students' abilities related to physical movements, ranging from simple to complex actions. Changes in movement patterns in this domain typically require at least 30 minutes of practice to develop effectively.

Learning should ideally connect students with real-world contexts, so that the knowledge they acquire can be applied effectively in professional and everyday life, accompanied by positive attitudes. As a result, the three domains of learning objectives—cognitive, affective, and psychomotor—are integrated into a unified and holistic learning process. The extent to which learning objectives are achieved can be determined through the assessment of learning outcomes.

Assessment of learning outcomes is an activity conducted by teachers or instructors to evaluate students' performance, either in written or oral form. The scores obtained by students serve as benchmarks to measure their mastery of the subject matter and determine whether the material delivered has successfully met the intended learning objectives. Conducting assessments is one of the core responsibilities of educators.

A study conducted by Fatimah (2020) stated that assessing students' skills can be done by conducting an evaluation to determine the extent of their understanding of the material that has been taught.

Law Number 20 of 2003, Article 39 Paragraph 2, on the National Education System, stipulates that educators are professionals responsible for planning and implementing the learning process, assessing learning outcomes, providing guidance and training, and conducting research and community service, particularly in higher education. One of the essential competencies educators must possess is the ability to carry out assessments—both during the learning process and for final outcomes. Assessment plays a crucial role in measuring the success of educational activities, especially teaching and learning.

Assessments can be carried out at the beginning, during, and at the end of the learning process. These stages are inseparable from the learning objectives, the instructional content delivered, and the methods used to deliver that content, all of which work together to achieve the desired goals. According to Rahmawati (2014), "Assessment is a series of activities aimed at obtaining, analyzing, and interpreting data about the learning process and outcomes, conducted systematically and continuously, in order to provide meaningful information for decision-making."

Assessment should not only take place at the end of the instructional process, but should begin during lesson planning, continue throughout instruction, and conclude with a final evaluation. The learning process is a systematic and integrated whole, and its phases cannot be separated. Every stage carried out by the teacher—from lesson planning to classroom execution and final evaluation—must be viewed as a connected process.

Furthermore, Anurrahman (2013) stated that, in the specific context of classroom learning, assessment is conducted to evaluate students' progress and outcomes, diagnose learning difficulties, provide feedback to improve the teaching and learning process, and determine student promotion. Through proper assessment, accurate information can be gathered about the effectiveness of the educational process itself.

A preliminary study conducted among accounting education students revealed a low level of analytical ability in dealing with journal-related material. The ability to solve journal-related cases must be supported by analytical thinking, as one of the core functions of a journal is analytical in nature. Analytical ability is part of the cognitive domain, specifically categorized as a Higher Order Thinking Skill (HOTS). To measure students' analytical abilities, a well-designed assessment is required, which necessitates the use of appropriate evaluation tools, known as assessment instruments. In order to ensure that assessments effectively measure learning outcomes, lecturers and educators must develop instruments that are capable of capturing those intended outcomes accurately. Hence, the development of assessment instruments becomes essential.

The development of assessment instruments can be seen as a strategic step toward acquiring tools that can measure specific indicators aligned with the intended learning objectives. Current educational practices place greater emphasis on 21st-century learning, particularly in the context of the Fourth Industrial Revolution (Industry 4.0). This era demands the mastery of the 4C competencies:

1. Critical Thinking and Problem Solving,
2. Communication Skills,
3. Collaboration Skills, and
4. Creativity and Innovation.

These competencies are not easy to achieve, but one of the effective ways to reach them is through HOTS-based assessments. According to the Directorate General of Teachers and Education Personnel (DIRJEN GTK, 2018), the government encourages students to master these competencies through the implementation of HOTS. These competencies include critical thinking, creativity and innovation, communication, collaboration, and self-confidence. These five-character traits are expected to be instilled in students and are reflected in national examination systems as part of 21st-century skills.

Higher-level learning is characterized by an instructional approach that challenges students to think deeply—to apply, analyze, and evaluate situations from various perspectives.

Research conducted by Puspaningtyas, as cited in Hasna (2019), emphasized that Higher Order Thinking Skills (HOTS) are highly necessary in the current era of globalization. Students are no longer guided

step-by-step or directly told how to solve problems; instead, they are expected to discover solutions independently. This shift demands the development of higher-order thinking skills to solve complex problems.

According to Hasna (2019), HOTS refers to a way of thinking that goes beyond memorization—it involves analyzing, manipulating information, and drawing conclusions that lead to the creation of new and creative ideas. In the present study, the focus is on HOTS at levels C4 and C5, which refer to analyzing and evaluating.

Uno (2014) states that the cognitive domain deals with learning objectives related to mental processes, beginning from basic levels of knowledge and progressing to higher levels such as evaluation. This domain consists of six hierarchical levels, ranging from the lowest level (knowledge) to the highest level (evaluation), which can be described as follows:

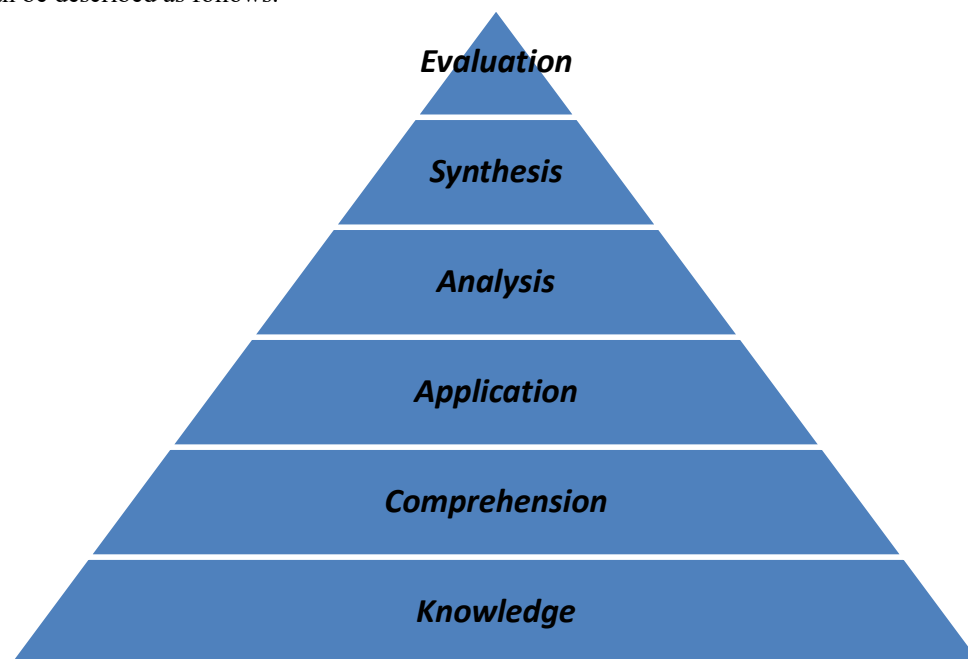


Figure 1. Taksonomi Kognitif Bloom (Retno, 2011)

Figure 1 illustrates that Knowledge, Comprehension, and Application are categorized as lower-order thinking skills, while Analysis, Synthesis, and Evaluation fall under higher-order thinking skills (HOTS). This study focuses on the assessment of the cognitive domain.

A. **HOTS Indicators**

According to Eka Fitriani (2019), citing Krathwohl in *A Revision of Bloom's Taxonomy: An Overview – Theory Into Practice*, the indicators used to measure higher-order thinking skills include:

- 1) Analyzing
 - a) Analyzing incoming information by breaking it down or structuring it into smaller parts to recognize patterns or relationships.
 - b) Identifying and distinguishing between causes and effects in a complex scenario.
 - c) Identifying or formulating relevant questions.
- 2) Evaluating
 - a) Assessing solutions, ideas, and methodologies using appropriate criteria or existing standards to determine their effectiveness or usefulness.
 - b) Formulating hypotheses, offering critiques, and conducting tests.
 - c) Accepting or rejecting a statement based on pre-determined criteria.
- 3) Creating
 - a) Generalizing an idea or perspective about a given topic.
 - b) Designing a method to solve a problem.
 - c) Organizing elements or parts into a new structure that has never existed before.

According to Hasna Alfasina (2019), HOTS is essential for accounting education in general, and particularly for vocational high school (SMK) students majoring in accounting. This is because accounting students at SMK are expected to be ready to work in the fields of accounting and finance.

Muhamad & Sulaiman (2013) emphasized that professional accountants must develop skill-based paradigms, one of which involves thinking skills.

Based on a survey conducted by Nugroho (2018), it was found that most students are still at the level of lower-order thinking, where they can only solve problems that include complete and direct information. These types of problems do not require the student to make inferences as would be required in problems designed to stimulate higher-order thinking.

The findings of Purba (2019) revealed that students' skills in developing questions aligned with HOTS standards were still low compared to their ability to create LOTS-type questions. Similarly, Sukarni (2019) concluded that encouraging students to think at a higher level is considered difficult, and that accounting and economics teachers face significant challenges in assessing students based on HOTS.

These conditions highlight the urgent need to develop valid and reliable assessment instruments to improve students' higher-order thinking skills and ultimately enhance learning outcomes.

B. Assessment Instrument

Learning activities are conducted with the purpose of achieving Basic Competencies, Competency Achievement Indicators, and predefined learning objectives. To measure the extent to which these indicators and objectives are achieved, an instrument known as an assessment instrument is used. According to Bastaman (2016), a teacher's ability to design test instruments significantly affects students' learning outcomes. Well-designed assessment instruments that meet appropriate criteria can effectively detect student performance and serve as a basis for evaluating and improving future instructional programs.

Assessment instruments must comprehensively represent the learning material and be capable of addressing the problems posed in the instructional content. The Law of the Republic of Indonesia No. 14 of 2005 on Teachers and Lecturers (2006: 167–168) explains that the standard of educational assessment is part of the national education standards, referring to the mechanisms, procedures, and instruments used to evaluate students' learning outcomes.

Assessment is the process of collecting and processing information to measure students' learning achievement. According to Ella Yulaelawati (2004), in the field of education, the term "assessment" has two meanings: evaluation and assessment in a narrower sense. Evaluation refers to a comprehensive appraisal of educational programs, involving interconnected components such as planning, implementation, and monitoring. Assessment, on the other hand, is a subset of evaluation, focused specifically on learning outcomes related to the graduates' competency standards.

In the context of this research, the assessment instrument used is a test. Tests are commonly used to assess students' levels of knowledge and skill. Generally, two types of tests are used to measure cognitive abilities: essay tests and objective tests. According to Sudjana (2016), essay tests can be categorized into open-ended essays, restricted response essays, and structured essays. Objective tests come in various forms such as true-false, multiple-choice with various formats, matching, and short-answer or completion tests.

In constructing an assessment instrument, a test blueprint (grid) must first be developed. A test blueprint typically includes indicators of competency achievement or learning objectives, the difficulty level of the questions, subject matter, the number of items, item numbers, and assessment criteria. The next step is to design the instrument based on the blueprint. The design of the instrument should align with the type of test being developed.

Afterward, the validity and reliability of the instrument must be tested. Arikunto (2013:211) defines validity as a measure indicating the degree to which an instrument is valid. A valid instrument has high validity, while a less valid instrument has low validity. Winarno (2011:106) suggests that validity is better understood as the degree to which the measurement results reflect the actual situation (truth), rather than being entirely correct or entirely incorrect. Test reliability refers to the consistency of a test—how dependable it is in producing relatively stable scores even when administered under varying conditions. A highly reliable test is considered appropriate for measuring cognitive abilities or other specific constructs.

2. RESEARCH METHOD

This study is a developmental research adopting the Thiagarajan development model, which consists of four stages: (1) Define, (2) Design, (3) Develop, and (4) Disseminate. However, this research was conducted only up to the third stage.

The research sample consisted of fifth-semester students in the Accounting Education Program, Faculty of Teacher Training and Education, Universitas Muhammadiyah Sumatera Utara. Data collection techniques involved the use of tests and questionnaires. The test was used to measure students' analytical thinking abilities, while the questionnaire was used to gather information on whether the test items developed were valid and reliable in fulfilling the criteria of a Higher-Order Thinking Skills (HOTS) test.

The indicators used to measure the validity of the test instrument included:

1. Clarity of the items
2. Relevance of the items
3. Content validity
4. Content accuracy
5. Absence of bias
6. Language appropriateness

Data analysis techniques utilized a descriptive qualitative method, based on the stages of development, which involved several steps to produce the final product. The steps include:

1. Needs Analysis
2. Assessment Instrument Design
3. Validation of the Assessment Instrument Design
4. Revision of the Instrument Design
5. Trial Implementation of the Assessment Instrument
6. Final Revision of the Assessment Instrument

3. RESULTS AND DISCUSSION

A. *Research Findings*

The development of an assessment instrument to enhance analytical thinking skills was conducted with fifth-semester students of the Accounting Education Program. The development of the assessment instrument was carried out by analyzing the need for assessment tools, designing the instrument based on the curriculum, syllabus, and lesson plan (RPS) for the Service Company Accounting course. The research followed the Thiagarajan development model, which includes four stages: (1) Define, (2) Design, (3) Develop, and (4) Disseminate. This study was conducted only up to the development stage.

1) Define Stage

The first activity in this research was conducting a needs analysis to determine the importance of assessment instruments. It is well recognized that assessment is a vital part of the teaching and learning process. As stated by Sudjana (2016):“The objectives of assessment are: (1) to describe students' learning proficiency, thus identifying their strengths and weaknesses in various subjects; (2) to evaluate the effectiveness of the educational and instructional process in schools, particularly how far it has succeeded in transforming student behavior toward the intended educational goals.” Based on Sudjana's statement, it can be concluded that assessment plays a crucial role in measuring both the implementation of the learning process by lecturers and students, and the achievement of the intended learning objectives and competencies. In this study, the accounting material is limited to general journal topics.

Understanding the general journal includes grasping basic concepts, analyzing transactions, identifying relevant accounts, determining the debit or credit positions, and recording entries accurately in the journal columns. The journal is a foundational step in accounting, as accuracy in journal entries greatly influences the accuracy of financial statement preparation and interpretation. This underscores the selection of journal material as the subject of focus in this research. The curriculum used in this study follows the Indonesian National Qualification Framework (KKNI), targeting learning outcomes at level 6.

2) Design Stage

The process of designing the assessment instrument began with the development of a test blueprint (grid). The aim was to ensure that the test content would be representative and relevant to the material taught by the instructor, aligned with the syllabus or lesson plan. The next step was assembling the test or drafting the assessment instrument. The types of questions, item numbers, and total number of items are presented in the following table:

Table 1. Blueprint of the Assessment Instrument

Course Learning Outcomes (CLOs)	Learning Material	Competency Indicators	Test Format	Item Numbers	Number of Items
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Students are expected to demonstrate competence in:	J u r n a l n u m	1. Accurately describe the function of a journal	M u l t i p l e C h o i c e	1,2,3	3
1. Describing the function of journals		2. Correctly classify accounts		15, 17	2
2. Recording transactions into the journal		3. Analyze transactions based on the normal position of accounts		4, 5, 6, 7, 8, 9, 10, 18, 25	9
3. Identifying accounts affected by transactions		4. Determine account positions in the journal		11, 12, 13, 14, 19	5
4. Determining which accounts should be debited or credited		5. Accurately fill journal columns based on source documents		21, 22, 23	3
		6. Review the journal thoroughly		16, 20, 24	3

The test was constructed based on the previously developed test blueprint. A total of 25 multiple-choice questions were created. The test design must refer to the Indicators of Learning Achievement (IPK) and the predetermined learning objectives to ensure that the assessment is measurable. According to Sudjana (2016), "Writing test items involves translating indicators into questions whose characteristics align with the test blueprint; each question must be clear, focused, and use effective language, both in the form of the question and its answer choices."

3) Development Phase

The development of the assessment instrument was carried out by testing both the validity and reliability of the test.

4) Test Validity

The development phase of the assessment instrument included validating the test items by a panel of three expert lecturers: 1. Mariati, S.Pd, M.Ak. 2. Pipit Putri Hariani MD, S.Pd, M.Si. 3. Sofia, SE, M.Ak. The results of the validation conducted by these lecturers are as follows:

Table 2. Expert Validator Assessment Results

Aspect	Indicator	Expert Validator	Total	%	Average / Aspect
Clarity	1. Alignment between learning objectives and questions	5 / 4 / 5	14	93.33%	
	2. Alignment of questions with HOTS cognitive levels (C4-C6)	5 / 4 / 4	13	86.67%	
	3. Clarity of instructions for answering questions	5 / 5 / 5	15	100%	93.33
Relevance	4. Questions are related to learning objectives	5 / 4 / 5	14	93.33%	
	5. Questions are in accordance with the targeted aspects	5 / 4 / 5	14	93.33%	93.33
Content Validity	6. Statements reveal accurate and correct information	4 / 5 / 5	14	93.33%	93.33
Content Accuracy	7. Accuracy of questions with expected answers	4 / 5 / 4	13	86.67%	86.67
Lack of Bias	8. Questions contain a single complete idea	4 / 4 / 4	12	80.00%	80.00
Language Accuracy	9. Language used is easy to understand	5 / 4 / 5	14	93.33%	
	10. Language is simple and clear	5 / 4 / 5	14	93.33%	
	11. Grammar conforms to standard (Indonesian Spelling System - EYD)	5 / 4 / 5	14	93.33%	93.33

The validity carried out by the lecturer can be considered valid, as explained below:

1. Clarity: This indicator can be considered very good. However, the component "Suitability of Questions with HOTS KKO (C4-C6)" shows an average score of 86.67, which is lower than the average score for the clarity component. The test is constructed based on the learning objectives and the Competency Achievement Indicators. The formulation of KKO in the test already refers to HOTS, which consist of analysis, synthesis, and evaluation.

2. Relevance: Shows a very good average score of 93.33. The questions are aligned with the targeted aspects; in the question development, they have already matched the aspects aimed to be achieved, as can be seen from the formulated learning objectives.
3. Content Validity: Shows a very good average score of 93.33. The questions developed already provide clear information to the validators.
4. Content Accuracy: Shows a very good average score of 86.67, although slightly below the overall average score. The accuracy between the questions and the expected answers is appropriate.
5. Absence of Bias: Shows a very good average score of 80, although still below the overall average score. Even though this aspect shows the lowest score among those assessed, it is still considered good.
6. Language Accuracy: Shows a very good average score of 93.33. The language used in this test instrument is easy to understand, the instructions are clear and simple, and the correctness of the language conforms to standard Indonesian grammar rules (EYD).

The expert validator concluded that this test instrument is feasible to use without any revisions. The test reliability analysis indicates that the instrument is reliable, as shown in the following table:

Table 3. Reliability Statistics

Cronbach's Alpha	N of Items
.712	25

Test reliability refers to the consistency of a test, that is, the extent to which a test can be trusted to produce relatively stable scores, even when administered in different conditions. The reliability level of this assessment instrument falls into the high category, indicating that the quality of the developed instrument is good.

One of the objectives of this study is to describe students' analytical thinking abilities. The next step is to assess students' analytical skills through a test based on the General Journal topic. This test was administered to 32 students of the Accounting Education Study Program in the 2023/2024 academic year via Google Forms. Out of the 32 students, 29 submitted their responses. The results can be seen in the following table:

Table 4. Students' Test Results

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 20.00	5	17.2	17.2	17.2
24.00	2	6.9	6.9	24.1
28.00	5	17.2	17.2	41.4
32.00	4	13.8	13.8	55.2
36.00	1	3.4	3.4	58.6
40.00	1	3.4	3.4	62.1
44.00	4	13.8	13.8	75.9
48.00	1	3.4	3.4	79.3
52.00	2	6.9	6.9	86.2
56.00	1	3.4	3.4	89.7
72.00	3	10.3	10.3	100.0
Total	29	100.0	100.0	

Table 4 shows that the lowest score obtained was 20, while the highest score was 72. Only 10.3% of the students passed the test, while 89.7% did not meet the passing criteria. The average score achieved by the students can be seen in the following table:

Table 5. Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
VAR00001	29	20.00	72.00	37.6552	15.91108
Valid N (listwise)	29				

Table 5 illustrates the learning outcomes in accounting with the topic of general journal.

The highest score achieved by students was 72, while the lowest was 20. The average score obtained was 37.66 out of a maximum possible score of 100. This condition indicates that students' learning outcomes fall into the low category, and it can be concluded that students' analytical thinking abilities are also in the low category.

B. Discussion

The development of an assessment instrument aimed at enhancing analytical thinking skills was carried out in the Accounting Education Study Program, specifically for fifth-semester students. The development of the instrument followed three main stages: define, design, and development.

During the development process, the instrument underwent validity and reliability testing. The validity test, conducted by a team of experts (in this case, lecturers), concluded that the assessment instrument was valid and feasible for implementation. Meanwhile, the reliability test showed that the instrument was reliable, leading to the conclusion that the instrument could be used without any revisions.

To measure students' analytical thinking skills, a test was administered via Google Forms. The results indicated that students' analytical thinking abilities were categorized as low, with the lowest score being 20, the highest 72, and an average score of 37.66 out of 100. These results provide a clear illustration that the analytical thinking ability among the students is significantly low.

One of the main challenges of this research was the COVID-19 pandemic, which necessitated that all research activities be conducted online.

4. CONCLUSION

Based on the results of the study, it can be concluded that the development of the assessment instrument was carried out through three stages: the Define stage, the Design stage, and the Development stage. The assessment instrument was designed with reference to the Indonesian National Qualification Framework (KKNI), syllabus, lesson plans (RPS), Competency Achievement Indicators, and learning objectives.

The instrument underwent both validity and reliability testing. The validity test, conducted by expert validators (lecturers), confirmed that the instrument was valid, while the reliability test showed that the instrument was reliable, indicating that the assessment tool was appropriate for use without revision.

The test results administered to students indicated that their analytical thinking ability, as measured through the topic of the General Journal, was categorized as low, with an average score of 37.66.

Future research is recommended to explore teaching and learning strategies that can enhance students' analytical thinking skills through innovative and creative learning approaches, particularly in the context of the Industry 4.0 era.

REFERENCES

- Alfasina, H., Siswandari, & Susanti, A. D. (2019). Hubungan kecerdasan logis-matematis dan efikasi diri dengan keterampilan berpikir tingkat tinggi pada pembelajaran akuntansi. *Jurnal Tata Arta*, 5(3), 1–11.
- Arifin, Z. (2016). *Evaluasi pembelajaran: Prinsip, teknik dan prosedur*. PT Remaja Rosdakarya.
- Arikunto, S. (2013). *Prosedur penelitian: Suatu pendekatan praktik*. PT Rineka Cipta.
- Asmuni. (2020). Problematika pembelajaran daring di masa pandemi Covid-19 dan solusi pemecahannya. *Jurnal Paedagogy: Jurnal Penelitian dan Pengembangan Pendidikan*, 7(4), 281–288.
- Bastaman, S. A., & Winarno, M. E. (2016). Pengembangan instrumen penilaian pengetahuan mata pelajaran Pendidikan Jasmani Olahraga dan Kesehatan (PJOK) kelas VIII semester gasal. *Jurnal Pendidikan: Teori, Penelitian, dan Pengembangan*, 1(7), 1449–1463.
- Direktorat Jenderal Guru dan Tenaga Kependidikan. (2018). *Buku pegangan pembelajaran berorientasi pada keterampilan berpikir tingkat tinggi*. Kementerian Pendidikan dan Kebudayaan.
- Fatimah, S., & Pahlevi, T. (2020). Pengembangan instrumen penilaian berbasis HOTS (Higher Order Thinking Skills) pada kompetensi dasar menerapkan sistem penyimpanan arsip sistem abjad, kronologis, geografis, nomor, dan subjek di jurusan OTKP SMKN 1 Bojonegoro. *Jurnal Pendidikan Administrasi Perkantoran (JPAP)*, 8(2), 318–328.
- Fitriana, E. (2019). *Pengembangan instrument assessment HOTS (High Order Thinking Skill) pada mata pelajaran IPS terintegrasi nilai-nilai pembangunan karakter kelas V SD/MI di Bandar Lampung* [Skripsi, Universitas Lampung].
- Madya, R. U. W. (2011). *Taksonomi Bloom: Apa dan bagaimana menggunakannya*. Pusdilat KNPk.
- Nugroho, P. A., & Kurniawan, Y. (2018). Meningkatkan higher order thinking skill dan sikap terbuka melalui media pembelajaran android. *Journal of Komodo Science Education*, 1(1), 79–94.
- Permendiknas. (2007). *Standar penilaian pendidikan*. CV Novindo Pustaka Mandiri.
- Prasetya, T. I. (2012). Meningkatkan keterampilan menyusun instrumen hasil belajar berbasis modul interaktif bagi guru-guru IPA SMP N Kota Magelang. *Journal of Educational Research and Evaluation Universitas Negeri Semarang*, 1(2), 106–112.
- Purba, A. W., & Suyono, A. (2019). Profil kemampuan mahasiswa dalam mengembangkan instrumen tes mengacu standar HOTS pada mata kuliah evaluasi dan teknik pencapaian hasil belajar. *PeKA: Jurnal Pendidikan Ekonomi Akuntansi*, 7(2), 15–20.
- Purwanto. (2009). *Evaluasi hasil belajar*. Pustaka Pelajar.
- Sudjana, N. (2016). *Penilaian hasil proses belajar mengajar*. PT Remaja Rosdakarya.

- Sugiyono. (2017). *Metode penelitian dan pengembangan research and development*. Alfabeta.
- Sukarni, U. R., & Mulgaidah. (2019). Analisis kesulitan guru SMA dalam pelaksanaan pembelajaran ekonomi akuntansi berdasarkan Kurikulum 2013 di Provinsi Riau. *Ekuitas: Jurnal Pendidikan Ekonomi*, 7(2), 68–74.
- Sunarti, & Rahmawati, S. (2014). *Penilaian kurikulum 2013*. CV Andi Offset.
- Uno, H., & Koni, S. (2014). *Assessment pembelajaran*. Bumi Aksara.
- Winarno, M. E. (2011). *Metodologi penelitian dalam pendidikan jasmani*. Media Cakrawala Utama Press.
- Yulaelawati, E. (2004). *Kurikulum dan pembelajaran: Filosofi, teori dan aplikasi*. Pakar Raya.