

An Analysis of Cognitive Levels in Sociology Assessment Instruments for Senior High School: A Teacher Document Study

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ABSTRACT

Studies that specifically analyze the distribution of cognitive levels in sociology assessment instruments remain limited. This highlights the importance of research that maps the alignment of assessment instruments developed by teachers with the competency standards outlined in the curriculum. Therefore, this study aims to map the distribution of cognitive levels in senior high school sociology assessment instruments, identify emerging content trends, and analyze the relationships among the cognitive levels represented. The study employed a qualitative method with a content analysis approach. Data were collected through document analysis of 11 assessment instruments developed by 11 senior high school sociology teachers in Sleman Regency, which included both objective and essay items. The analysis process was supported by ATLAS.ti software, and the results were presented in the form of distribution tables, Sankey diagrams, and network views. The findings indicate that the test items were dominated by the C4 (analysis) level, with 99 items, suggesting a shift in assessment focus from lower-order thinking skills (LOTS) to higher-order thinking skills (HOTS), although items at the C5 level were still limited, and the C6 level had not yet been accommodated. The content trends were dominated by contextual themes such as social problems, social structure, social interaction, and social integration, which are consistent with the intended learning competencies of sociology. The analysis of inter-level cognitive relationships revealed a supportive hierarchy: C1 to C2 (is a part of), C2 to C3 (is cause of), C3 to C4 (is cause of), C4 to C5 (is associated with), and C5 to C6 (is associated with). The implications of this study can be used to develop assessment items that promote higher-order thinking skills.



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A. INTRODUCTION

Research specifically analyzing documents developed by sociology teachers to map the cognitive levels in assessment instruments and examine their alignment with learning outcomes remains limited. Previous studies have evaluated the quality of sociology test items, including both multiple-choice and open-ended questions. One study investigated the quality of the Odd Semester Final Examination items and found high content validity, yet the reliability was low, and most items had limited discriminative power (Fajar & Junaidi, 2022). Another study developed diagnostic tests to identify students' misconceptions, which were effective but only moderately reliable and focused on specific concepts (Mardiani & Sylvia, 2019). Additionally, other research designed open-ended questions to enhance students' reasoning skills, which were valid and practical, but did not systematically analyze the relationships among cognitive levels (Reski & Sylvia, 2021).

This study aligns with previous research in assessing item quality but differs by systematically mapping cognitive levels, analyzing emerging content trends, and examining inter-level relationships, including higher-order thinking skills (HOTS), in

teacher-developed sociology assessment instruments. Although prior studies have addressed item quality, their focus has been limited to validity, reliability, or specific concept understanding (Mardiani & Sylvia, 2019; Reski & Sylvia, 2021; Fajar & Junaidi, 2022). Comprehensive analyses of the distribution across all cognitive levels (C1–C6), content trends, and inter-level relationships within teacher-developed instruments are still lacking. This gap limits our understanding of the extent to which assessments support HOTS and align with intended learning outcomes.

Cognitive assessment is as important as other domains because it serves as a primary indicator of students' ability to understand concepts, relate them to social phenomena, and develop critical thinking skills (Kasanah & Pratama, 2024; Huseng et al., 2025). Moreover, many sociology teachers have yet to develop items targeting higher-order thinking, resulting in assessment instruments largely dominated by recall and comprehension questions. Ideally, assessment instruments should measure not only the ability to remember and understand (C1 and C2) but also application (C3), analysis (C4), evaluation (C5), and creation (C6), as described in the revised Bloom's Taxonomy (Anderson & Krathwohl, 2001; Huseng et al., 2025).

Previous studies have shown that secondary school test items are generally concentrated at lower cognitive levels, namely remembering and understanding (Nurhaliza & Mustopa, 2023; Putri et al., 2025). The low proportion of HOTS items is expected to hinder the development of students' critical thinking skills in the future (Yusmilda et al., 2023). Critical thinking is an essential competence in the 21st century (Kartowagiran et al., 2021; Yusmilda et al., 2023). Therefore, sociology assessments should be designed to encourage students to think reflectively, critically, and analytically about dynamic social phenomena (Pratiwi et al., 2017). However, if teachers' assessments focus solely on basic knowledge, the goal of fostering students' critical awareness in understanding social phenomena will be difficult to achieve. Challenges in developing high-quality assessments are influenced by several factors, including teachers' understanding of learning theories, cognitive motivation, data literacy, and 21st-century competency demands (McMillan, 2018).

Based on these issues, research on mapping and analyzing trends in cognitive levels of secondary school sociology assessments is essential. This study aims to identify and map cognitive assessment items developed by teachers, analyze emerging content trends, and examine relationships among cognitive levels. The findings are expected to provide insights into the extent to which the assessment instruments reflect intended learning outcomes, including conceptual mastery, critical thinking, and analytical skills, thereby supporting the development of higher-quality cognitive assessments in the future. As a primary contribution, this study offers novelty by systematically mapping the distribution of cognitive levels in teacher-developed sociology assessments, analyzing emerging content trends, and exploring inter-level relationships using content analysis and a network-based approach. This approach not only evaluates technical item quality but also provides insights into the cognitive structure of the instruments and their alignment with competencies, thereby offering a foundation for developing more effective assessments that optimally foster students' critical thinking skills.

B. METHODS

This study employs qualitative content analysis to examine cognitive assessment instruments in senior high school Sociology courses. Qualitative content analysis was chosen because it can reveal patterns, trends, and the distribution of cognitive levels present in the instruments developed by teachers. The coding process refers to the

Revised Bloom's Taxonomy framework developed by Anderson and Krathwohl (2001), with categories ranging from C1 (Remember) to C6 (Create) serving as the primary reference for item classification (Anderson & Krathwohl, 2001).

The subjects involved were 11 Sociology teachers who are members of the Subject Teacher Forum for Sociology (MGMP Sociology). The data were secondary and collected through document analysis of 11 cognitive assessment instruments developed by teachers as part of their instructional evaluation practices. The instruments included both objective tests (multiple-choice) and essay tests. The documents were selected using purposive sampling, ensuring that the analyzed data were relevant and representative of teachers' evaluation practices and accurately reflected the variety of instruments used in the classroom.

The analysis was conducted with the assistance of ATLAS.ti software, which facilitated systematic and comprehensive data management, coding, and interpretation. The validity of the analysis was enhanced through peer debriefing with colleagues to ensure coding consistency and minimize subjective bias. Each assessment item was coded according to cognitive level categories from C1 (Remember) to C6 (Create), and the items were subsequently grouped based on categories and subcategories to examine distributions and patterns. Relationships among categories, content, and competency indicators were then analyzed. The results were presented in the form of tables, Sankey diagrams, and network views, providing complementary perspectives in which tables emphasize quantitative distributions while Sankey diagrams and network views offer more detailed visualizations of trends and interrelationships among the instrument components.

C. RESULT AND DISCUSSION

This section presents the results and discussion regarding (1) the mapping of cognitive levels in sociology assessment instruments; (2) the analysis of trends in assessment instruments developed by teachers; and (3) the analysis of relationships among categories within the sociology assessment instruments.

1. Mapping of Cognitive Levels in Sociology Assessment Instruments

Mapping cognitive levels in assessment instruments is an important approach to understanding the extent to which the questions developed by teachers reflect the intended learning objectives. In the context of Sociology education, the focus of cognitive assessment is not merely on evaluating students' ability to recall and comprehend concepts; the instruments should also be designed to measure students' skills in applying, analyzing, evaluating, and creating. This analysis is grounded in the revised Bloom's Taxonomy by Anderson and Krathwohl, which categorizes cognitive processes into six levels, from C1 (Remember) to C6 (Create). By conducting such mapping, it becomes possible to clearly illustrate the extent to which the instruments developed achieve a balance between lower-level items and those requiring higher-order thinking skills. This is particularly important because a balanced distribution of questions across cognitive levels supports students' critical thinking abilities, aligning with the primary learning outcomes of Sociology at the senior high school level.

Table 1. Frequency of Cognitive Levels in Sociology Assessment Instruments

Name Instrumen	Cognitive Levels						Total=295*
	C1=65*	C2=71*	C3=46*	C4=99***	C5=14*	C6=0*	
1	1	1	0	3***	1	0	6
2	2	4	3	11***	0	0	20
3	1	3***	3***	3***	0	0	10
4	5	2	0	17***	1	0	25
5	8	25***	4	13	0	0	50
6	10	9	3	18***	5	0	45
7	9	9	13	15***	4	0	50
8	10***	0	0	0	0	0	10
9	0	1	11***	3	0	0	15
10	19***	13	7	11	0	0	40
11	0	4	2	5***	3	0	14

Note: *= total frekuensi ***= the most frequent items in each instrument

Based on the analysis presented in Table 1, which summarizes 11 Sociology assessment instruments developed by teachers, the distribution of items shows variation across cognitive levels: C1 (Remember) = 65 items, C2 (Understand) = 71 items, C3 (Apply) = 46 items, C4 (Analyze) = 99 items, C5 (Evaluate) = 14 items, and C6 (Create) = 0 items. These data indicate that assessments are no longer entirely focused on lower-order thinking skills (C1, C2, and C3) but are beginning to shift toward higher-order thinking skills (HOTS), with C4 (Analyze) being the most dominant level (99 items). Despite the dominance of C4 items, C5 (Evaluate) remains minimal, and C6 (Create) is not represented at all. These findings confirm previous studies, which noted that assessment practices in secondary schools still tend to emphasize lower- to mid-level cognitive skills, while higher-order thinking skills are often neglected (Dallashah, 2024).

The dominance of items at levels C1 to C4 can be attributed to several factors. One factor is the heterogeneity of students' abilities, which are generally at intermediate and low levels, leading teachers to select items that are relatively easy to measure at lower or mid-level cognitive domains (Dahlan, 2021; Kencana et al., 2022; Muhayimana et al., 2022). In addition, students are generally not accustomed to working on items requiring higher-order thinking, particularly C5 and C6, so teachers tend to gradually build students' skills through analysis questions (C4) (Dallashah, 2024; Suharno et al., 2022). Moreover, the low proportion of items at C5 and C6 also reflects teachers' limited ability to develop items based on the revised Bloom's Taxonomy, especially at higher cognitive levels (Rismaulhijjah, 2022).

Further examination of the individual instruments reveals variation in item distribution. Instruments 1, 2, 4, 6, 7, and 11 are dominated by C4 items; Instrument 3 is relatively balanced across C2, C3, and C4; Instrument 5 is dominated by C2; Instruments 8 and 10 are dominated by C1; while Instrument 9 emphasizes C3. This pattern indicates a tendency among teachers to accommodate analysis items (C4) as a strategy to foster students' critical thinking. These findings also enrich previous research showing that most teachers in Indonesia still tend to develop items at lower- to mid-level cognitive domains (C1–C3) (Saraswati & Agustika, 2020), and when higher-order items are included, they generally only reach C4 (Analyze) (Pangestuti et al., 2024). This highlights that developing evaluative (C5) and creative (C6) items remains a significant challenge for teachers (Liu et al., 2024).

Nevertheless, the emphasis on C4 (Analyze) can be interpreted positively. Analytical skills serve as a stimulus for the development of other critical thinking abilities, even though C5 remains limited and C6 is not yet accommodated. This is consistent with

studies showing that the dominance of C4 items contributes to fostering critical thinking skills, although the progression to C5 and C6 is still limited (Rachmawati. M & Hidayati, 2023). Therefore, reorienting assessment instrument design to provide a more proportional representation of higher-order thinking skills, particularly from C4 to C6 according to the revised Bloom's Taxonomy by Anderson & Krathwohl, is highly necessary, even though C4 has already been implemented to a considerable extent.

2. Analysis of Content Trends in Teacher-Developed Assessment Instruments

The study of sociology assessment emphasizes the importance of mapping cognitive levels with the scope of learning content as a basis for designing instruments that not only measure conceptual mastery but also stimulate higher-order thinking skills. The development of assessment instruments in sociology essentially progresses gradually, moving from conceptual foundations toward more complex social understanding. At the initial stage, students are introduced to the history of sociology, followed by an understanding of the nature and object of sociology, as well as its functions and roles. Sociological theory is then positioned as part of the foundational understanding, as it provides students with a framework to interpret and analyze the social phenomena under study.

Assessment instruments then address topics such as social phenomena and the realities of a pluralistic society, followed by themes of socialization, social values and norms, social interaction, and social action. This process provides students with opportunities to understand how individual and group behaviors are connected to broader social structures. Subsequently, topics such as social structure, social differentiation, and social integration are presented as analytical frameworks to explain both the order and dynamics of society. The assessment instruments also incorporate more contextual themes, such as social institutions, social problems, social change, and social control. Through these themes, students are guided to identify real-life societal problems. Research-oriented social themes are also embedded in the development of the instruments, enabling students to link sociological theory with empirical phenomena, which aligns with the intended learning outcomes of sociology.

These themes are reflected in the sociology assessment instruments developed by teachers and have been aligned with the learning outcomes for senior high school sociology. To examine the trends of themes emerging from teacher-developed instruments, see Figure 1 and Figure 2.

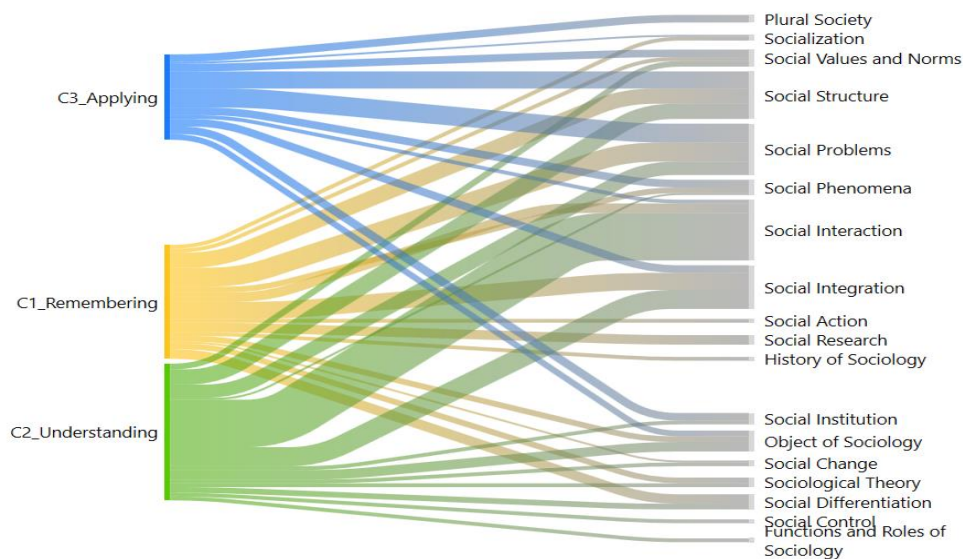


Figure 1. Trends in Content Themes Developed by Teachers (Levels C1-C3)

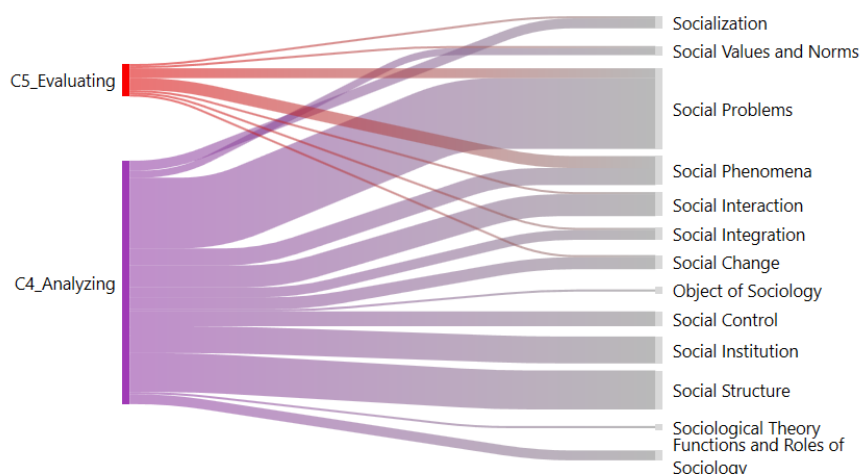


Figure 2. Trends in Content Themes Developed by Teachers (Levels C4-C6)

The analysis of content themes across different cognitive levels in sociology assessment instruments underscores the importance of aligning learning materials with higher-order thinking skills and the intended learning outcomes. At the C1 (remembering) level, the dominant themes in teacher-developed instruments focus on social dynamics, such as social structure, social problems, and social integration, which closely correspond to the realities of Indonesian society. Notably, these real-life themes appear more frequently at the C1 level than conceptual themes, such as the history of sociology or sociological theory. This indicates that even at the remembering level, assessment instruments are beginning to incorporate concepts grounded in students' everyday experiences. This finding aligns with the observation that assessment instruments, while aiming to recall basic concepts, remain linked to empirical realities (Riyanto, 2023). Furthermore, concepts such as social structure are more extensively contextualized in senior high school sociology textbooks (Pratiwi et al., 2024). Other C1 themes, including social problems and social integration, also dominate, reflecting their relevance to students' daily social experiences. These results suggest that even at the remembering level, teachers should design assessment instruments that contextualize social realities, providing students with a foundation to understand patterns of order and relationships among individuals and groups in society.

At the C2 (understanding) level, social interaction consistently dominates the themes in teacher-developed instruments. This theme supports students in developing a deeper understanding of social dynamics. Social interaction is presented not merely as a basic concept but as a foundational framework for interpreting social contexts. It is considered effective content because it directly relates to students' lived experiences (Indriyani et al., 2021; Yusnaldi et al., 2024). Emphasizing C2 is therefore highly relevant, as it enables students to comprehend social interactions at both individual and group levels, enhancing their understanding of social realities they encounter firsthand.

At the C3 (applying) level, assessment instruments require students to apply sociological concepts to real-world contexts rather than merely recall or understand them. Consequently, the dominant themes in C3-level instruments are social dynamics, particularly social structure and social problems. As with C1, these themes remain central at C3 because social structure provides a fundamental framework for understanding societal order, while social problems represent contextually relevant issues closely linked to students' daily experiences. Teachers tend to design questions that allow students to

recall, understand, and apply the concepts in real-life situations. The prominence of social structure in senior high school sociology aligns with students' direct experiences (Pratiwi et al., 2024). Social problems also continue to be a key theme at the C3 level due to their contextual and practical relevance. Together, these themes constitute critical dimensions of sociology learning: social structure illustrates societal order and social problems reflect social disorder (Darakay & Murwani, 2023; Palijama, 2022). Including these themes at the C3 level helps students connect theoretical knowledge with real-world phenomena effectively.

At the C4 (analyzing) level, students are expected to analyze social phenomena within society. The dominant theme at this level is social problems, reflecting the complexity of multiple structural components, including social, cultural, and economic factors. This finding supports the idea that contextualizing social problems in assessments enhances students' problem-solving abilities (Ummaira & Sylvia, 2025). C4-level instruments should remain grounded in empirical social realities to stimulate critical and in-depth thinking about social phenomena. Designing sufficient and relevant HOTS items aligned with learning outcomes is essential to foster analytical understanding in real-life social contexts (Pratiwi et al., 2017).

At the C5 (evaluating) level, teacher-developed instruments primarily focus on social problems and social phenomena. This indicates that teachers aim to encourage students not only to understand or explain concepts but also to critically evaluate various social realities. The emphasis on these themes at the C5 level shows that teachers intend to develop students' capacity to reflect critically on societal complexities.

This trend aligns closely with the learning outcomes of phase E in senior high school sociology, in which students are expected to understand the function of sociology as a discipline that critically examines society. Additionally, students should be able to recognize personal identity, explain social actions, describe social relationships, explain the roles of social institutions in maintaining social order, and understand various social phenomena in multicultural societies through fundamental sociological concepts. Overall, the observed trend in content themes demonstrates that teacher-developed assessment instruments are aligned with the intended learning outcomes of phase E, supporting students' cognitive development from basic recall to higher-order analysis and evaluation of complex social realities.

3. Analyzing the Relationships Between Categories in Sociology Assessment Instruments

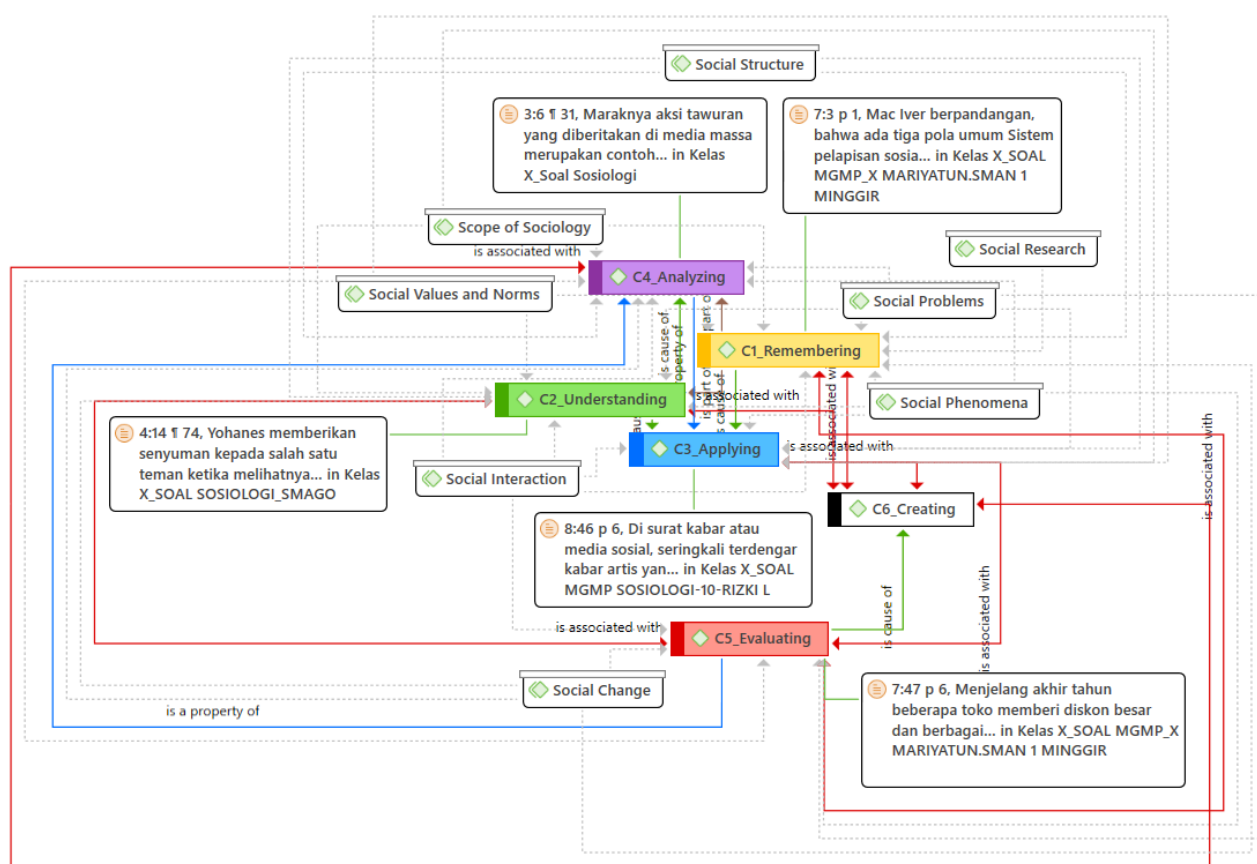


Figure 3. Visualizing Relationships Between Categories in Sociology Assessment Instruments

Based on the visualization of inter-level cognitive relationships according to Bloom’s Taxonomy, the analysis illustrates the connections between cognitive levels C1 through C6, and vice versa. In this context, relational analysis can be understood as a hierarchical process in which cognitive levels are interconnected. The visualization shows that Level C1 (remembering) is exemplified by an item such as: “Max Weber argues that there are three common patterns of social stratification systems with strict and rigid lines of power in society ...” This item requires students merely to recall a basic concept. From this example and the visualization (Figure 3), it is evident that C1-level items are related to C2-level items in an “is part of” relationship, as remembering forms an integral foundation for comprehension items. The relationship between C1 and C3 or C4 is interpreted as “is cause of”, since without recalling the basic concept, it is impossible to create items that require application or analysis. The relationship between C1 and C5 is interpreted as “is associated”, because remembering is related to evaluation, although it does not directly cause it; similarly, the relationship with C6 is “is associated”, as creativity is always grounded in foundational knowledge. Applying the revised Bloom’s Taxonomy effectively enhances students’ higher-order thinking skills, progressing from simpler to more complex cognitive levels (Abdulrahman, 2023; Hayya & Dharin, 2023).

At the C2 (understanding) level, relationships with other cognitive levels are also evident. The C2–C1 relationship is interpreted as “is a property of”, since understanding is a characteristic of the knowledge that students remember. An example of a C2-level item in teacher-developed instruments is: “Yohanes smiles at a friend from a distance.

This smile is intended to show his happiness. The condition for this interaction is ...” This item requires students to comprehend the situation before responding. Thus, the relationship between C2 and C3 or C4 is interpreted as “is cause of”, while the relationship with C5 and C6 is “is associated”. This indicates that comprehension serves as a foundational basis for designing HOTS assessment items (Hajaroh, 2021; Handayani et al., 2021).

C3 (applying) items relate to C1 and C2 as “is a property of”, since application emerges from previously remembered and understood knowledge. An example C3 item is: “In newspapers or social media, it is often reported that a long-forgotten celebrity or a street performer becomes famous. The characteristic of social stratification relevant to this phenomenon is ...” This item requires students to apply the concept of social stratification to social mobility. The relationship between C3 and C4 is interpreted as “is cause of”, as applying a concept leads to deeper analysis. The relationship between C3 and C5 is “is associated”, because application is linked to evaluation, though not directly causing it, while the relationship between C3 and C6 is “is cause of”, as mature application can foster creativity. Through this hierarchical structure, theoretical and practical aspects of assessment design are integrated (Momen et al., 2022).

At the C4 (analyzing) level, students are required to analyze social phenomena. The relationship between C4 and C1, C2, and C3 is interpreted as “is cause of”, because analysis cannot occur without remembering, understanding, and applying concepts. The relationship between C4 and C5 is also “is cause of”, since evaluation derives from analysis, while the relationship with C6 is “is associated”. An example C4 item is: “The frequent reports of student brawls in mass media exemplify social phenomena in the form of criminality. One factor causing these brawls is ...” This item requires students to dissect social phenomena to identify their causes.

At the C5 (evaluating) level, an example item is: “At the end of the year, several stores offer big discounts. One critical attitude to prevent this social phenomenon is ...” Here, students are asked to assess consumerist behaviors and determine an appropriate response. The relationships between C5 and C1, C2, and C3 are “is associated”, because evaluation depends on prior remembering, understanding, and application, even though these are not directly causal. The relationship between C5 and C4 is “is cause of”, as evaluation stems from in-depth analysis.

For C6 (creating), no items were found in the teacher-developed instruments. Conceptually, however, this level represents the peak of Bloom’s Taxonomy and is “is associated” or even “is cause of” previous cognitive levels, since creation relies on a strong cognitive foundation. These findings support the notion that higher-order thinking skills such as analyzing, evaluating, and creating are advanced developments that can only be achieved when foundational cognitive levels are well established (Listiani & Rachmawati, 2022). Systematic implementation of Bloom’s Taxonomy enhances conceptual understanding, analytical skills, information synthesis, and evaluative abilities (Hayya & Dharin, 2023). This underscores that critical thinking (creating) is built upon the foundation of remembering through evaluating (Hayya & Dharin, 2023; Listiani & Rachmawati, 2022; Marta et al., 2024).

D. CONCLUSION AND SUGGESTIONS

The mapping of cognitive levels in high school sociology assessment instruments indicates a dominance of C4 (analyzing) items, with limited representation of C5 (evaluating) and no items at C6 (creating). The distribution is as follows: C1 (remembering) = 65 items, C2 (understanding) = 71 items, C3 (applying) = 46 items, C4 (analyzing) = 99 items, C5 (evaluating) = 14 items, and C6 (creating) = 0 items.

These findings suggest a shift from lower-order thinking skills (C1–C3) toward higher-order thinking skills (C4–C6), reflecting teachers' efforts to foster students' critical thinking abilities. Content analysis further indicates that the assessment instruments are aligned with the Phase E Sociology learning outcomes, ranging from the mastery of basic concepts to the understanding of complex social contexts. The themes covered such as social problems, social structure, social interaction, and social integration are relevant to students' everyday experiences.

The relationships among cognitive levels form a hierarchical structure in which each level supports the next: C1 underpins C2, which enables C3, followed by C4 and C5, with C6 representing the highest level. This structure underscores that foundational knowledge and understanding serve as the basis for higher-order thinking skills, including evaluation and creation. The study also recommends the development of assessment instruments that explicitly incorporate C5 and C6 to ensure that students' higher-order thinking skills are fully accommodated in line with the research objectives.

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REFERENCES

- Abdulrahman, S. A. (2023). The Effects of Revised Bloom's Taxonomy Enriched Instruction on EFL Learners' Writing Performance in an Academic Writing Course. *International Journal of Social Sciences & Educational Studies*, 10(3), 290–305.
- Anderson, L. W., & Krathwohl, D. R. (2001). *A taxonomy for learning, teaching, and assessing: A revision of Bloom's taxonomy of educational objectives*. Longman.
- Dahlan, D. (2021). Development of Higher Order Thinking Skills Assessment for High School Economic Subject. *Journal of Economic Education*, 10(2), 134–141.
- Dallasheh, W. (2024). Content Analysis of the EFL Textbook Units According to Bloom's Taxonomy: Between Theory and Practice. *Journal of Higher Education Theory and Practice*, 24(4), 304–326.
- Darakay, J., & Murwani, P. (2023). The Social Structure of the Aru People from a Sociocultural Perspective in the Aru Islands Regency. *Komunitas: Jurnal Ilmu Sosiologi*, 4(2), 27–33.
- Fajar, R., & Junaidi, J. (2022). Item Analysis of Multiple-Choice Questions (MCQs) in the Odd Semester Final Examination for Grade XII High School Sociology. *Jurnal Sikola: Jurnal Kajian Pendidikan Dan Pembelajaran*, 4(1), 23–34.
- Hajaroh, M. (2021). Higher-Order Thinking Skills as a Foundation for the Development of Educational Assessment and Evaluation. *FOUNDASIA*, 12(2), 59–74.
- Handayani, N., Suranto, A., Zamroni, Imanita, M., Setiawan, J., & Fadli, M. R. (2021). Development of higher order thinking skill assessment instruments in social studies learning. *International Journal of Evaluation and Research in Education (IJERE)*, 13(2), 923–933.
- Hayya, L. A., & Dharin, A. (2023). The Role of Bloom's Taxonomy Cognitive Domain in Developing Elementary School Students' Critical Thinking Skills. *J-PGMI: Jurnal Pendidikan Guru MI*, 6(1), 73–83.

- Huseng, A. M., Auliyuddin, S., & Nursalam, N. (2025). Educational Taxonomy: Dimensions of Knowledge, Attitude, and Skills. *Socius: Jurnal Penelitian Ilmu-Ilmu Sosial*, 2(9), 107–116.
- Indriyani, I. E., Syaharuddin, & Jumriani. (2021). Social Interaction Contents on Social Studies Learning to Improve Social Skills. *The Innovation of Social Studies Journal*, 2(2), 93–102.
- Kartowagiran, B., Hamdi, S., Istiyono, E., Ayub, A. F. M., & Dewanti, S. S. (2021). Integrating the 21st Century Character Values for Elementary School Students. *İlköğretim Online*, 20(2), 33–43. <https://doi.org/10.17051/ilkonline.2021.02.07>
- Kasanah, M., & Pratama, A. P. (2024). Taxonomy of Educational Objectives and Learning Outcomes Assessment. *Pedagogik: Jurnal Pendidikan Dan Riset*, 2(2), 146–162.
- Kencana, N. P., Purwati, O., & Munir, A. (2022). The alignment of assessment tasks with teaching objectives and activities based on Bloom's taxonomy: Case study. *ELT Worldwide*, 9(1), 44–55.
- Listiani, W., & Rachmawati, R. (2022). Transformation of Bloom's Taxonomy in HOTS-Based Learning Evaluation. *JURNAL JENDELA PENDIDIKAN*, 2(3), 397–402.
- Liu, Q., Wald, N., Daskon, C., & Harland, T. (2024). Multiple-choice questions (MCQs) for higher-order cognition: Perspectives of university teachers. *Innovations in Education and Teaching International*, 61(4), 802–814.
- Mardiani, & Sylvia, I. (2019). Development of Three-Level Objective Diagnostic Tests to Detect Misconceptions in Sociological Characteristics. *Jurnal Sikola: Jurnal Kajian Pendidikan Dan Pembelajaran*, 1(1), 69–79.
- Marta, M. A., Purnomo, D., & Gusmamel. (2024). The Concept of Bloom's Taxonomy in Instructional Design. *Lencana: Jurnal Inovasi Ilmu Pendidikan*, 3(1), 227–246.
- McMillan, J. H. (2018). *Classroom Assessment: Principles and Practice for Effective Standards-Based Instruction*. Pearson.
- Momen, A., Ebrahimi, M., & Hassan, A. M. (2022). Importance and Implications of Theory of Bloom's Taxonomy in Different Fields of Education. *Proceedings of the 2nd International Conference on Emerging Technologies and Intelligent Systems*, 515–525.
- Muhayimana, T., Kwizera, L., & Nyirahabimana, M. R. (2022). Using Bloom's taxonomy to evaluate the cognitive levels of Primary Leaving English C questions in Rwandan schools. *Curriculum Perspectives*, 42(1), 51–63.
- Nurhaliza, A., & Mustopa, A. (2023). Analysis of Cognitive Levels of Exam Questions Based on the Revised Bloom's Taxonomy in Social Studies. *Jurnal Pendidikan Ilmu Sosial*, 33(2), 145–156.
- Palijama, F. (2022). The Development of Social Theory and Theoretical Approaches to Addressing Social Problems in Indonesia. *HIPOTESA: Jurnal Ilmu-Ilmu Sosial*, 16(2), 12–20.
- Pratiwi, P. H., Hidayah, N., & Agustina, D. (2024). Indonesiansociography Analysis Of Themes And The Implications For Strengthening High School Sociology Learning In Indonesia. *Sociologia, Problemas E Práticas*, 104, 43–67.
- Pratiwi, P. H., Hidayah, N., & Martiana, A. (2017). Developing Hots Modules for Sociology Learning Assessment Course. *Jurnal Cakrawala Pendidikan*, 36(2), 201–209.
- Putri, R. E., Pertiwi, A. I., Sunarya, A. E., Yuendi, E. C., Afyah, W., & Putri, H. E. (2025). Cognitive Level Analysis of Multiple Choice Questions for the UTS Science Subject for Grade IV Elementary School Based on the Revised Bloom's Taxonomy. *Jurnal Kolaboratif Sains*, 8(12), 8228–8235.
- Rachmawati, M., & Hidayati, Y. M. (2023). Analysis of Mid-semester Assessment in Cultivating Critical Thinking of Elementary School Students. *ICOLAE ASSEHR*, 757, 1290–1299.
- Reski, P., & Sylvia, I. (2021). Design of Open-Ended Questions to Enhance Students' Reasoning Skills in Sociology Learning at SMA N 1 Sungai Aur, West Pasaman Regency. *Jurnal Sikola: Jurnal Kajian Pendidikan Dan Pembelajaran*, 2(3), 147–161.
- Rismaulhijjah, W. A. (2022). Item Analysis of Daily Test Questions Resulting from the Development of Teacher Materials on Human Movement Systems for Grade XI Science Students. *Bioedu: Berkala Ilmiah Pendidikan Biologi*, 11(3), 643–661.
- Riyanto, E. (2023). Authentic Assessment through a Contextual Approach. *Prediksi: Profesi Pendidik Indonesia*, 3(1), 15–28.

- Saraswati, P. M. S., & Agustika, G. N. S. (2020). Higher-Order Thinking Skills in Solving HOTS Questions in Mathematics. *Jurnal Ilmiah Sekolah Dasar*, 4(2), 257–269.
- Suharno, Akhyar, M., Pambudi, N. A., Roemintoyo, Sukatiman, Habsya, C., & Cahyono, B. T. (2022). Testing Students' Learning Readiness Based on Higher-Order Thinking Skills in Indonesia. *Jurnal Ilmiah Pendidikan Teknik Dan Kejuruan*, 15(1), 62–69.
- Ummaira, W. A., & Sylvia, I. (2025). Problem-Solving Ability in Sociology Learning (A Case Study of Grade XI IIS at SMA Negeri 2 Padang). *Naradidik: Journal of Education and Pedagogy*, 4(1), 1–8.
- Yusmilda, Budi, I. S., Zuhad, H., Basith, A., & Zuhriyah, I. A. (2023). Development of HOTS-Based Assessment Instruments at the Elementary Education Level in the Society 5.0 Era. *Al Madrasah: Jurnal Ilmiah Pendidikan Dasar Ibtidaiyah*, 7(1), 429–442.
- Yusnaldi, E., Hariro, A. Z. Z., Abdullah, B. M., Rahman, F. S., Ramadhani, R., & Melisa, W. (2024). The Influence of Social Interaction on the Social Studies Learning Process in Elementary Schools/Madrasah Ibtidaiyah. *Jurnal Pendidikan Tambusai*, 8(1), 2715–2721.