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The Backward Design Learning Strategy Based on Literacy and Numeracy for Sociology Academic Ability Tests

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Abstract: Education in Indonesia faces the crucial challenge of strengthening literacy and numeracy, especially in Sociology, a subject demanding data analysis and interpretation of social phenomena. This challenge is compounded by the need to prepare students for the Academic Ability Test (TKA), which emphasizes critical thinking and questions based on literacy-numeracy models.This best-practice research aims to implement the Backward design strategy integrated with literacy and numeracy to enhance the readiness of Grade XII students at SMAN 7 Yogyakarta for the Sociology TKA. The strategy was conducted through three stages: 1) Identify Desired Results (understanding TKA question formats); 2) Determine Acceptable Evidence (formative and summative assessments, including external Try Outs/TO); and 3) Design Learning Experiences (differentiated instruction and innovative activities like "Bowling Litnum" and independent TKA question creation). The method used was descriptive qualitative with a subject of 70 Grade XII students who chose Sociology as an elective. The results showed a significant improvement in the group of students predicted to be eligible for the National Achievement-Based Selection (SNBP), with the average score of summative assessments and TO TKA reaching 75–78 (meeting the success target of ≥75). However, the overall average score remained below the target due to motivational differences between eligible and non-eligible students.The conclusion indicates that Backward design is effective in improving learning outcomes for motivated groups and successfully integrates literacy-numeracy into Sociology learning, while also creating transferable evidence-based practice. The key success factors were the synchronization of TKA blueprints and external collaboration.
Keywords: backward design; literacy; numeracy; academic ability test; sociology.

Strategi Pembelajaran Backward design Berbasis Literasi Numerasi Tes Kemampuan Akademik Sosiologi

Abstrak: *Pendidikan di Indonesia menghadapi tantangan penguatan literasi dan numerasi yang krusial, terutama dalam mata pelajaran sosiologi yang menuntut analisis data dan interpretasi fenomena sosial. Tantangan ini diperberat oleh kebutuhan persiapan murid menghadapi Tes Kemampuan Akademik (TKA), yang menekankan pada kemampuan berpikir kritis dan model soal berbasis literasi numerasi. Penelitian praktik baik ini bertujuan mengimplementasikan strategi Backward design yang terintegrasi literasi dan numerasi untuk meningkatkan kesiapan murid kelas XII SMAN 7 Yogyakarta dalam menghadapi TKA Sosiologi. Strategi ini dilaksanakan melalui tiga tahap: 1) Mengidentifikasi hasil yang diinginkan (memahami bentuk soal TKA); 2) Menentukan bukti pencapaian (asesmen formatif, sumatif, dan Try Out/TO eksternal); dan 3) Merancang pengalaman belajar (pembelajaran berdiferensiasi dan aktivitas inovatif seperti "Bowling Litnum" dan pembuatan soal TKA mandiri oleh murid). Metode yang digunakan adalah kualitatif deskriptif dengan subjek 70 murid kelas XII yang memilih mata pelajaran sosiologi. Hasil praktik baik menunjukkan peningkatan signifikan pada kelompok murid eligible SNBP, dengan rata-rata nilai asesmen sumatif dan TO TKA mencapai 75–78 (memenuhi target keberhasilan ≥75). Namun, capaian rata-rata secara keseluruhan masih di bawah target karena perbedaan motivasi antara murid eligible dan non-eligible. Kesimpulan menunjukkan bahwa Backward design efektif meningkatkan hasil belajar pada kelompok termotivasi dan berhasil mengintegrasikan literasi-numerasi dalam pembelajaran sosiologi, serta menciptakan evidence-based practice yang dapat ditransfer. Faktor keberhasilan utama adalah sinkronisasi kisi-kisi TKA dan kolaborasi eksternal.*
Kata kunci: *backward design; literasi; numerasi; Tes Kemampuan Akademik (TKA); sosiologi.*

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1. Introduction

Education in Indonesia still looks out on challenges in literacy and numeracy, necessitating a more effective and integrated learning approach (Beatty et al., 2021). In the context of Sociology, the integration of literacy and numeracy becomes even more crucial considering the subject's characteristics, which demand the ability to analyze social data, interpret survey statistics, and understand social phenomena through quantitative and qualitative approaches. Setiawati et al. (2025) declare that the social science literacy skills of students post-pandemic indicate a need for strengthening in comprehending complex texts and social contexts. This suggests that sociology learning needs to be designed to simultaneously develop both literacy and numeracy skills.

Another challenge faced is preparing students for the Tes Kemampuan Akademik (TKA) known as Academic Competence Test, which is scheduled to be implemented for the first time in November 2025. The necessity of preparing for the TKA is increasingly important following the issuance of Permendikdasmen 2025 Number 9, which establishes the TKA as the standard achievement test for 12th grade high school students. This test no longer solely measures memorization of subject material but also emphasizes critical thinking skills through literacy and numeracy-based question models. With this new pattern, students are required to be able to understand information, analyze data, and solve contextual problems relevant to daily life.

Therefore, the general objective of implementing this best practice is to prepare for the TKA early and more thoroughly, so that students are not only accustomed to the different question formats but are also trained to integrate knowledge with Higher-Order Thinking Skills (HOTS) (Hao et al., 2025). Readiness for TKA not only helps students achieve optimal results but also equips them with essential competencies relevant for continuing education and facing future challenges (Yusefzadeh, 2019). Asesmen Kompetensi Minimum (AKM), known as Minimum Competency Assessment program, which is integrated into the educational curriculum, has become a policy instrument that encourages to strengthen literacy in the learning and assessment process (Novebri & Samosir, 2024). The existence of this assessment requires teachers to design learning that focuses not only on content mastery but also on developing literacy and numeracy competencies that can be applied in various contexts.

The particular condition at SMAN 7 Yogyakarta shows that students' literacy and numeracy skills are in the good category, but the scores are not yet stable. Based on data from the SMAN 7 Yogyakarta education reports from 2022 to 2025, students' literacy skills generally stagnated in the "Good" category, with an achievement that had briefly increased in 2023, declined in 2024, and then rose again in 2025. Literacy was assessed based on the ability to comprehend both fictional and non-fictional texts. Meanwhile, students' numeracy skills consistently remained in the "Good" category, showing a stable trend in 2023, remaining good in 2024, and experiencing an increase in 2025. Numeracy covers students' understanding of concepts related to numbers, algebra, geometry, and data. Overall, numeracy shows a more stable and positive trend compared to literacy, which is fluctuating and is the aspect most in need of improvement in certain assessment years.

Based on internal evaluations through sociology learning, literacy and numeracy skills are reflected in student achievement in solving problems that require data analysis, graph interpretation, and comprehension of academic texts within the sociology subject. This condition necessitates innovation in learning strategies that can effectively integrate the development of literacy and numeracy.

To address the issues described above, a systematic and structured learning approach is required. Backward design, developed by Wiggins and McTighe (2005), offers a three-stage framework proven effective in improving the quality of learning: determining desired results, determining acceptable evidence, and planning learning experiences. This approach has been applied in various curriculum contexts and has shown significant improvements in curriculum understanding and teachers' ability to design relevant assessments (Kerimoğlu & Altun, 2024).

Tsunami et al. (2024) in their research provide a guide for integrating measurable learning outcomes (A-SMART learning outcomes) into the backward design process, emphasizing the importance of alignment among learning goals, assessment, and learning activities. This approach is highly relevant for TKA preparation as it ensures that every learning activity is designed to achieve competencies that are measurable and provable.

The novelty of this best practice lies in the implementation of Backward design with the primary goal of enabling students to solve Sociology TKA problems that require the integration of literacy, numeracy, and Higher-

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Order Thinking Skills. This novelty is based on a comparison with similar research on Backward Design, but none has targeted national assessments. For example, the research by Baughman et al. (2014) investigated the application of competency-based assessment through the Backward design approach and successfully encouraged the effective development of holistic professional skills in students. This differs from Ali (2023), who applied Backward Design in designing Social Studies learning using the observation method to enhance learning effectiveness and student ability. This implementation is adapted in this best practice through student activities of observing TKA questions and then creating their own questions.

The learning partners involved in this best practice include both internal and external parties. Internal parties are the school management team organizing the advanced Try Outs (TO) of TKA, and the Guidance and Counseling (BK) teachers who students consult regarding their chances of being eligible for the 40% quota for the National Selection based on Achievement (SNBP: Seleksi Nasional Berbasis Prestasi). External parties are Teacher Working Group (MGMP: Musyawarah Guru Mata Pelajaran) for Sociology and the Education, Youth, and Sports Agency (Dinas Dikpora: Dinas Pendidikan, Pemuda dan Olahraga) of the Special Region of Yogyakarta (DIY). The involvement of these institutions is in the provision of TKA Try Out questions. These activities were held on October 8, 2025 for the municipality and October 15, 2025 for the regional level.

The concept of "numeracy across the curriculum" developed in contemporary education emphasizes that numeracy is not only the responsibility of mathematics teachers but needs to be integrated across all subjects, including sociology (Oxford Research Encyclopedia of Education, 2022). In the context of sociology learning, numeracy can be integrated through the analysis of research data, interpretation of social statistics, and the use of graphs to understand social and economic trends. This approach is highly relevant for sociology learning, which requires the ability to comprehend quantitative data.

Secondary school sociology learning has unique characteristics that allow for the natural integration of literacy and numeracy. Suraiya et al. (2024), in their evaluation of the integrated Social Studies learning program in Indonesian secondary schools using the Stufflebeam model, showed that learning which integrates various literacy skills can enhance students' understanding of social phenomena. This indicates that sociology has great potential to serve as a platform for integrated literacy and numeracy development.

Effective sociology learning requires students' ability to read and analyze various types of texts, ranging from news excerpts, journal articles, and research reports, to statistical data. Furthermore, students also need to be able to interpret quantitative data such as graphs, tables, and diagrams that are often used to explain social phenomena. These abilities align with the literacy and numeracy components that are the focus of the minimum competency assessment.

Based on the problem background outlined, this research aims to develop and implement a Backward design learning strategy based on literacy and numeracy in the sociology subject at SMAN 7 Yogyakarta. This research is expected to contribute in several aspects: (1) developing a learning model that can enhance students' literacy and numeracy skills through the sociology subject; (2) providing an alternative systematic and measurable learning strategy for TKA preparation; (3) providing a practical guide for teachers in implementing Backward design integrated with literacy and numeracy development; and (4) providing evidence-based practice that can be adapted by other schools with similar characteristics.

The significance of this research is not limited to improving the quality of learning at SMAN 7 Yogyakarta, but can also contribute to the development of theory and practice in sociology education in Indonesia. By integrating backward design, literacy, and numeracy into sociology learning, this research is expected to become a model for learning innovation that can enhance students' abilities in preparing them for success in the TKA.

2. Materials and Methods

Based on the challenges outlined above, the steps taken to solve them are as follows. First, to conduct an observation that includes scrutinizing the TKA regulations, learning and assessment guidelines, and inventorying resources. Second, to determine the participants that are SMAN 7 Yogyakarta in the classes of XII 5 and XII 6. The reason for selecting these classes is that 97% of the students in these classes chose Sociology as their elective subject. Third, to schedule the implementation of this best practice during September-October 2025. Fourth, determining and implementing the Backward Design learning strategy using the following syntax: a) identifying

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the desired final results (learning objectives); b) determining the evidence or assessment that will measure the achievement of those results; and c) planning learning activities and teaching strategies that will help students achieve the goals and succeed in the assessment (Morris, 2021). This canonical three-stage model establishes constructive alignment among learning goals, assessment, and teaching methods with the fundamental principle of focusing on the end goal, which identifies the core, transferable understanding and competencies students must master (Morris, 2021). The fifth and final step is conducting data analysis and writing this best practice using a descriptive qualitative method.

The initial step in carrying out this best practice action is to mobilize the resources or materials required to implement the strategy, including the synchronization of the curriculum framework (kisi-kisi) with the subject matter, then collecting a question bank that meets the criteria for Higher-Order Thinking Skills (HOTS), which is then restored into the form or type of questions according to TKA characteristics. Lastly, collecting articles or news related to the material and downloading infographics containing literacy and numeracy from the Instagram account "Indonesia Baik" which will be used to create question stimuli. The results of the implementation process of this best practice action are described below.

3. Result and Discussion

Identification of Desired Results

The first stage in executing this best practice is to Identify Desired Results. This stage focuses on the final learning objectives, where the teacher identifies the understanding expected of the students at the end of the learning process, which is that students are accustomed to comprehending and are competent in working on TKA questions.

The introduction process is carried out by understanding the question formats of the TKA, namely: MC (Multiple Choice), MCMA (Multiple Choice Multiple Answer), Categorical Multiple Choice: True-False, and Categorical Multiple Choice: Appropriate-Inappropriate.

The learning objectives used throughout this research process refer to the regulations governing the TKA curriculum framework (kisi-kisi), specifically Regulation of the Head of the Education Standards, Curriculum, and Assessment Agency (Perkaban) Number 045/H/AN/2025 concerning the TKA Assessment Framework for SMA/MA/Equivalent and SMK/MAK levels. This document serves as the official guideline containing general regulations related to the subject tests and question formats used in the TKA, including the matrix of materials and competencies being tested.

Based on the identification of these question formats, it is concluded that the TKA question types are loaded with literacy and numeracy by integrating material within the Sociology subject.

The comprehension process is carried out in stages: Stage 1: Comprehension of questions on Class X material. Stage 2: Comprehension of questions on Class XI material. Stage 3: Comprehension of questions on Class XII material. Final Stage: Students possess the competency to understand questions covering material from Class X through XII.

Based on school data, out of a total of 72 students in Class XII Social Sciences, 70 students (97%) chose the Sociology TKA elective subject. This means the implementation of this best practice does not require special time outside of sociology class hours but is integrated into the sociology intrace curricular lessons for 5 class hours per week.

Determination of Acceptable Evidence of Learning

The second stage is to Determine Acceptable Evidence of Learning. Once the goals are established, the next step is to design how to prove that students have achieved those goals. This stage involves creating assessments that will be used to evaluate student performance, reflecting the desired understanding and skills. These assessments include both formative (for periodic feedback) and summative components.

The formative assessments conducted are: 1) Assessment of the ongoing material, and 2) Assessment of each topic from Class X, XI, up to XII material. Meanwhile, summative assessments utilize evaluation across the entire body of material. The assessment series concludes with internal and external TKA Try Outs. The external TKA Try Outs is carried out in partnership with the Sociology Teacher Working Group (MGMP) and the DIY Dikpora Agency.

The indicators of success for this stage are: 1) The average score of the summative assessments and TKA Try Outs reaches 75, and 2) 50% of students achieve a score above 75 on the TKA Try Outs conducted by both the school's internal team and external partners. Ultimately, the main target is that 100% of students who take the Sociology TKA elective subject achieve a score above 75 on the National TKA.

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Designing Learning Experiences and Instruction

The third stage is Design Learning Experiences and Instruction. This is the final stage in the backward design process, where the teacher selects and plans the learning activities that will prepare students to succeed in the assessments. The chosen learning content and activities must be aligned with and support the desired learning outcomes determined at the beginning of the process. This process begins with a pre-assessment (asesmen awal) which functions to map students' learning readiness levels, as shown in Figure 1 below.

Figure 1. Execution of the Pre-Assessment.

The learning process was implemented using differentiated instruction based on the students' readiness level, as determined by the data obtained from the initial assessment. The class was divided into two groups: the TKA-Ready Group and the TKA-Not-Ready Group. The TKA-Ready Group was assigned questions at the Higher-Order Thinking Skills (HOTS) level, while the TKA-Not-Ready Group was given questions at the Low-Order Thinking Skills (LOTS) level. After completing the questions, a discussion method was used for review. During the discussion, each student provided their argument regarding the answers to the questions they had worked on. Following the students' arguments, the teacher provided validation (feedback and confirmation), as illustrated in Figure 2 below.

Figure 2. Differentiated Learning Process for TKA Literacy and Numeracy Questions.

Formative assessment was carried out in two stages. The first stage involved the introduction of TKA questions loaded with literacy and numeracy content, sequenced by material from Class X, Class XI, and Class XII. Figure 3 below illustrates the introduction of example TKA questions that students were required to complete.

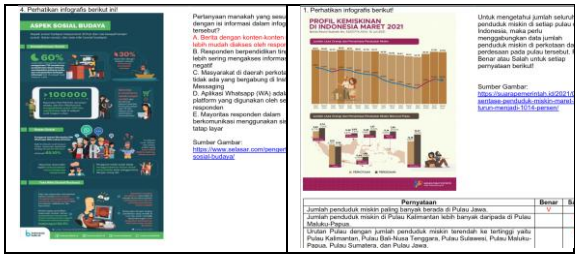

Figure 3. Introduction to TKA Questions Based on Literacy and Numeracy

In the second stage of question introduction, the focus was on independent TKA question prediction. Each student analyzed a problem based on a news article, data, or infographic selected by the teacher. They then created a data interpretation / annotation, which was subsequently transformed into either a literacy or a numeracy question. The class was divided into two groups (a literacy group and a numeracy group), as shown in Figure 4 below.

Figure 4. Student Activity When Creating Questions.

Once the questions were completed, the Teacher initiated the “Bowling Litnum” (Literacy and Numeracy Bowling) game. Students printed or wrote the questions they had created on a piece of paper. The questions were then inserted into plastic bottles, as shown in Figure 5 (the teacher provided 9 mineral water bottles). The bottles were arranged into a triangular shape. Each student took turns throwing a ball. The first bottle that was knocked down had its rolled-up question removed, and the student then answered the question. The student who originally created the question became the judge of whether the answer was correct or incorrect. Finally, the teacher provided feedback on both the question and the answer created by the students.

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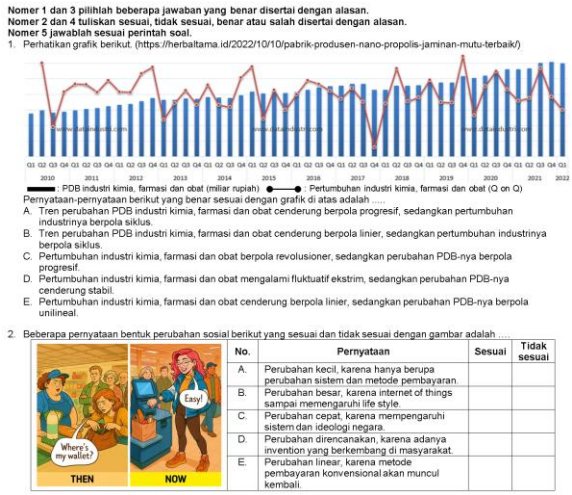
Figure 5. "Bowling Litnum" Game Device.

The formative assessment concluded with a TKA-based daily assessment (Penilaian Harian). This final formative assessment tested competencies on the Class XII material that had been studied. The question formats provided were varied, conforming to TKA standards, as illustrated in Figure 6 below.



Nomer 1 dan 3 pilihlah beberapa jawaban yang benar disertai dengan alasan.
Nomer 2 dan 4 tuliskan sesuai, tidak sesuai, benar atau salah disertai dengan alasan.
Nomer 5 jawablah sesuai perintah soal.

1. Perhatikan grafik berikut. (https://herbaltama.id/2022/10/10/pabrik-produsen-nano-propolis-jaminan-mutu-terbaik/)

PDB industri kimia, farmasi dan obat (miliar rupiah) ●—● : Pertumbuhan industri kimia, farmasi dan obat (Q on Q)

Pernyataan-pernyataan berikut yang benar sesuai dengan grafik di atas adalah .....

A. Tren perubahan PDB industri kimia, farmasi dan obat cenderung berpola progresif, sedangkan pertumbuhan industrinya berpola siklus.
B. Tren perubahan PDB industri kimia, farmasi dan obat cenderung berpola linier, sedangkan pertumbuhan industrinya berpola siklus.
C. Pertumbuhan industri kimia, farmasi dan obat berpola revolusioner, sedangkan perubahan PDB-nya berpola progresif.
D. Pertumbuhan industri kimia, farmasi dan obat mengalami fluktuatif ekstrim, sedangkan perubahan PDB-nya cenderung stabil.
E. Pertumbuhan industri kimia, farmasi dan obat cenderung berpola linier, sedangkan perubahan PDB-nya berpola unilineal.

2. Beberapa pernyataan bentuk perubahan sosial berikut yang sesuai dan tidak sesuai dengan gambar adalah .....

No.	Pernyataan	Sesuai	Tidak sesuai
A.	Perubahan kecil, karena hanya berupa perubahan sistem dan metode pembayaran.		
B.	Perubahan besar, karena internet of things sampai memengaruhi life style.		
C.	Perubahan cepat, karena mempengaruhi sistem dan ideologi negara.		
D.	Perubahan direncanakan, karena adanya invention yang berkembang di masyarakat.		
E.	Perubahan linear, karena metode pembayaran konvensional akan muncul kembali.		

Figure 6. Formative assessment of grade XII material.

The results of the implemented learning series can be observed through the scores of the formative and summative assessments. Table 1 and Table 2 below provide an overview of the learning development comparison.

Table 1. Formative Assessment Results

Type of Assessment	Average	Score >75
Introduction to the question	62	7%
Bowling Litnum	67	12%
By Topic	56	8%

Table 2. Summative Assessment Results and TKA Try Outs

Type of Assessment	Average	Score >75
Summative	59	7%
Internal TO	65	11%
MGMP TO	69	13%
Dikpora TO	56	15%

Based on Table 1 regarding the formative assessment results, it is apparent that the students' average achievement scores were still below the minimum learning mastery threshold, with average scores ranging from 56 to 67. The “Bowling Litnum” assessment showed the highest achievement, with an average of 67 and a percentage of scores above 75 at 12%. Meanwhile, the “By Topic” assessment had the lowest achievement, averaging 56 with only 8% of participants obtaining scores above 75. This indicates that students’ ability to comprehend the material still needs improvement through more contextualized learning and strategies that strengthen literacy and numeracy. This aligns with the findings of Darling-Hammond et al. (2020), who state that formative assessments play a vital role in providing feedback to improve the learning process.

Meanwhile, the summative assessment results in Table 2 show a similar tendency, where the average scores were still in the range of 56 to 69. The best achievement was observed in the MGMP TO activity, with an average of 69 and 13% of participants scoring above 75. Conversely, the Dikpora TO results showed the lowest average, at 56, although the percentage of scores above 75 reached 15%. This indicates a variation in the level of difficulty across assessments and differences in student readiness when facing more comprehensive evaluations. Improvement efforts need to be focused on intensive assistance and practice questions that align with the characteristics of the summative assessments.

Based on the results obtained, an evaluation was conducted to determine why the achievement did not meet the target. After conducting interviews with several students, it was found that students whose semester 1-4 ranking data did not place them in the 40% eligible group tended to underestimate the TKA and did not complete the assignments seriously. This contrasted with the 29 students who were predicted to be eligible, who enthusiastically followed the lessons and took the TKA Try Outs seriously. This became an unexpected finding, because although the school mandated all students to participate in the TKA, students who were certain they could not participate in the SNBP tended to choose Sociology as their elective subject. Some reasons they provided included believing that Sociology TKA was easy to learn, the material was not too heavy, and the learning process was enjoyable.

Based on these findings, the summative assessment and TKA Try Out data were segregated for students who, according to the

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Guidance and Counseling teacher's prediction, were considered eligible. The details can be examined in Table 3 below.

Table 3. Summative Assessment and TKA Try Out (TO) Results for Eligible Students

Type of Assessment	Average	Score >75
All Materials	76	46%
Internal TO	76	42%
MGMP TO	78	62%
Dikpora TO	75	54%

Based on Table 3, the summative assessment and TKA Try Out results for the eligible students indicate that, generally, the success indicators have been met. The average score of the summative assessments and TKA Try Outs fell in the range of 75–78, with the overall average score for the internal material and TO reaching 76, respectively. This fulfills the first indicator, which mandates that the average score of the summative assessments and TKA Try Outs reach a minimum of 75. The highest achievement was observed in the MGMP TO with an average of 78, demonstrating an increase in students' competency in comprehensively understanding and applying the material.

Regarding the percentage of students who obtained a score above 75, the results varied between 42% and 62%. The best achievement was again seen in the MGMP TO, with 62% of students exceeding the mastery threshold, followed by the Dikpora DIY TO at 54%. Meanwhile, the internal TO was slightly below the success indicator (42%). Overall, the second indicator (≥50% of students scoring above 75) was achieved in the majority of the assessments. This demonstrates a significant improvement compared to the previous stage and illustrates the effectiveness of the learning strategies and question practice in supporting the eligible students' readiness for the summative assessment.

This achievement suggests that the Backward design strategy is effective in improving learning outcomes within the group possessing high academic motivation. This finding aligns with the research by Wiggins and McTighe (2011), which affirms that the alignment among learning goals, assessment, and learning experiences can enhance conceptual understanding and knowledge transfer. Furthermore, the increased learning outcomes in the eligible group also indicate that students' intrinsic motivation plays a crucial role in the effectiveness of the learning strategy (Deci & Ryan, 2017). Meanwhile, the less motivated non-eligible student group showed lower results, emphasizing the importance of differentiated learning approaches and motivational support to ensure this strategy has a broader impact (Tomlinson, 2014). Overall, the implemented strategy demonstrated high effectiveness in a specific group but still requires strengthening the aspects of motivation and mentorship for students with lower learning readiness.

An interesting aspect of this best

practice is the result of the TKA question development by the students, which was subsequently reviewed and validated by the teacher to meet TKA standards. The students were then offered the idea of commercializing or selling these questions online. They agreed and were willing to offer them to peers in other schools. The questions were sold through the platform https://lynk.id/sosio, as shown in Figure 7. As a result, several of the students' peers have already purchased the questions, and the proceeds from the sales were used for the class fund.

Figure 7. Student-Created TKA Questions Sold Online.

The reflection on the implementation of this best practice indicates that the actions undertaken yielded a positive impact on the students' competence improvement, especially for those categorized as eligible to take the TKA. Based on the assessment results, the Backward design learning strategy successfully raised the average score of the summative assessments and TKA Try Outs, and increased the percentage of students obtaining scores above 75.

The tangible impact observed is the increased ability of students to understand various TKA question types, especially those loaded with literacy and numeracy content, as well as an increased student awareness to study strategically in accordance with the demands of the national assessment.

The steps taken in this best practice encompassed five main stages: (1) observation of regulations and resource investigation, (2)

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subject selection, (3) activity scheduling, (4) implementation of the Backward design strategy, and (5) data analysis using a descriptive qualitative method. This approach reinforced the constructive alignment among goals, learning, and assessment, as suggested by Morris (2021).

4. Conclusion and Suggestions

The Backward design learning strategy based on Sociology TKA literacy and numeracy proved to be quite effective, although the results were not uniformly distributed across all students. Its effectiveness was more pronounced in the eligible student group who exhibited high motivation and participated seriously in the learning process. Student response to this strategy was also positive, primarily because the learning was made more contextual by integrating literacy and numeracy into the Sociology TKA questions.

The main success factors stemmed from the synchronization between the TKA curriculum framework, the design of HOTS-based questions, and collaboration with external parties such as the MGMP and the DIY Dikpora Agency. Conversely, the factor contributing to the underperformance of some students was the low learning motivation within the group who felt they had no chance in the SNBP.

The crucial key learning from this entire process is that the success of a learning strategy is not solely determined by its sound design, but also by the emotional and motivational involvement of the participants. Thus, strengthening learning motivation is a key focus for maintaining the sustainability of the positive outcomes of this Backward design strategy.

The constraints encountered during the implementation of this best practice can be elaborated as follows: Differences in Student Motivation. One major constraint was the gap in motivation between students predicted to be eligible for the SNBP and those who were not. Students not included in the eligible category tended to underestimate the TKA implementation and completed the questions without diligence. This led to the overall assessment results not reaching the optimal target, despite improvements in certain groups.

Variation in Assessment Difficulty Levels: Based on the assessment results, there were differences in achievement scores between various types of assessments (formative and summative). Some assessments, such as the Dikpora DIY TO, showed lower averages due to their higher difficulty level compared to other assessments. This affected the consistency of students' learning outcomes.

Time Constraint of Implementation: The best practice was executed during August–October 2025, integrated within the Sociology class hours. This relatively short timeframe meant that the process of material deepening and TKA question practice could not be carried out optimally, especially for students with lower foundational abilities.

Resource and Facility Limitations: The process of compiling the HOTS question bank and material synchronization required additional time and effort from the teacher. Psychological Factors and Student Perception: Some students chose Sociology not due to interest or TKA readiness, but because they perceived it as easier. This perception became a barrier to building seriousness in learning and active participation during the learning and assessment process. Overall, these constraints indicate that the success of the Backward design strategy depends not only on the instructional design but also on the motivation, mental readiness, and supportive learning environment.

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