Proceedings of the 1st International Conference on Science and Islamic Studies
ISSN: 3024-9058 (media online)
Volume: 1, 2023
Publisher: Universitas Islam Negeri Alauddin Makassar

Empirical evaluation of higher order thinking skills (HOTS)-based instructional materials in Indonesian language teaching: a quasi-experimental approach

Mirnawati[1], Muhammad Yaumi[2], Andi Halimah[3], & Mardiana[4]

[1]Institut Agama Islam Negeri Palopo
[2,3,4]Universitas Islam Negeri Alauddin Makassar

Correspondence Email: mirnawati@iainpalopo.ac.id

ABSTRACT

This study evaluates the effect of using Higher Order Thinking Skills (HOTS)-based teaching materials on Indonesian language learning outcomes in higher education. In the context of higher education, it is important to develop effective learning approaches to improve Indonesian language learning outcomes. This study examined whether HOTS-based teaching materials can improve Indonesian language learning outcomes compared to conventional learning approaches. This study used an experimental research design with an experimental group receiving HOTS-based teaching materials intervention and a control group receiving conventional learning. The quasi-experimental design used was Nonequivalent Group Pretest-Posttest Control. Data analysis was conducted using a t-test to compare the results between the two groups. The results showed that the experimental group that received HOTS-based teaching materials intervention had significantly higher Indonesian learning outcomes than the control group. This finding shows that the use of HOTS-based teaching materials can have a positive impact on improving Indonesian language learning outcomes in higher education. The implication is the importance of paying attention to teaching materials that encourage students' higher-order thinking in developing the Indonesian language curriculum and learning methods in higher education. This research contributes to Indonesian language education by showing the effectiveness of using HOTS-based teaching materials in improving learning outcomes. The results reinforce our understanding of the importance of learning approaches that engage higher-order thinking and encourage students to think critically, analytically and creatively in the context of Indonesian language learning in higher education.

Keywords: Indonesian language; teaching materials; HOTS; learning outcomes

1. INTRODUCTION

Learning Indonesian at the tertiary level is crucial in shaping students' communication skills and preparing them to integrate with an increasingly global society (Dewi & Mikaresti, 2019; Firman et al., 2021; Rahmiati et al., 2019). However, based on a review of the existing literature, several obstacles arise in the current learning process (Aisyah et al., 2020). The main obstacles often encountered include the quality of teaching materials that still need to be improved and teaching methods that are often monotonous and have minimal interaction.

In addition, the focus of learning is often on passively absorbing material rather than developing students' critical and analytical thinking skills (Anderson et al., 2001; Kennedy, 2006). In the context of language learning, this not only hinders students' ability to understand and use Indonesian effectively but also limits the development of their soft skills, such as critical thinking, problem-solving, and creativity (Savitri & Kusnarto, 2021). This condition indicates the need for evaluation and innovation in learning Indonesian in tertiary institutions, including improving the quality of teaching materials and teaching methods.

Students must master technical knowledge and skills and the ability to think critically, analytically, and innovatively. In the era of globalization and the industrial revolution 4.0, as it is today, higher-order thinking skills (HOTS) are becoming increasingly important (Alimuddin et al., 2023; Wena, 2020; Widyawati et al., 2021). In learning Indonesian, mastering HOTS helps students understand, analyze, and evaluate complex texts and produce effective and persuasive discourse. However, the facts on the ground show that integrating HOTS into teaching materials and teaching methods is still not optimal(Ichsan et al., 2019).

In practice, the learning process is often teacher-centred and focuses on absorbing information, not developing students' thinking skills (In Biase, 2019; Sekwena, 2023). In addition, learning evaluation emphasizes factual and detailed knowledge more than understanding concepts and applying knowledge in new and different contexts (Falloon, 2020; Ruwaida, 2019). This condition indicates the need for concrete efforts to integrate HOTS in Indonesian language learning in tertiary institutions, starting from the design of teaching materials and methods to the evaluation system.

In recent years, many studies have been conducted on applying Higher Order Thinking Skills (HOTS) in learning, and the results show the importance of HOTS in improving the quality of learning. A study by Guswita (2021)shows the Development of Hots-Based Indonesian Digital Textbooks to Improve Problem-Solving Ability. It is a Research and Development study with a 4-D model at STKIP Muhammadiyahmuara Bungo. In other studies, Fitrianti & Husna (2021)concluded that using HOTS-based teaching materials can significantly improve students' critical thinking and analytical skills. This study uses a literature review study design.

This study adopts a phenomenological approach to understand the implementation of HOTS (Higher Order Thinking Skills) based learning at the tertiary level. Besides that, Herianto (2022) shows that HOTS-based learning encourages communication skills, collaboration, critical and creative thinking, computational logic, and civic awareness and responsibility. Lecturers and students benefit from this approach, with 74% achieving good or very good learning outcomes. The subjects in this study were 198 students who were taking the Student Development course from the Pancasila and Citizenship Education Study Program (PPKn) in Social Sciences Education (PIPS) at the Faculty of Teacher Training and Education (FKIP) University of Mataram.

This study aims to empirically evaluate the effectiveness of using teaching materials based on Higher Order Thinking Skills (HOTS) in learning Indonesian in tertiary institutions. This objective quantitatively measures students' thinking skills, especially regarding analysis, evaluation, and creating new ideas or concepts based on the studied material. In particular, this study aims to measure how much HOTS-based teaching materials can improve students' understanding and higher-order thinking skills.

Within this framework, this study aims to quantitatively measure student satisfaction with this teaching method and the extent to which they feel it is effective in assisting the development of their thinking skills. In addition, this research also seeks to determine student responses to the application of HOTS-based teaching materials in their learning process. The results of this study are expected to provide strong empirical data to support the development and improvement of teaching materials and methods of teaching Indonesian in tertiary institutions.

The research hypothesis confirms that implementing teaching materials based on Higher Order Thinking Skills (HOTS) will significantly improve students' understanding and higher-order thinking skills in learning Indonesian in tertiary institutions. The additional hypothesis indicates that students will respond positively to the application of HOTS-based teaching materials, which will be reflected in increased levels of satisfaction and positive perceptions of the effectiveness of this learning strategy.

The argument for the importance of this research is rooted in the fact that the modern era requires students to have high-level and critical thinking skills, such as analytical, evaluation, and creativity skills. However, most of the current teaching materials and methods are not fully effective in facilitating the development of these skills(Muhali, 2018). This study, thus, seeks to fill this gap by providing empirical evidence on the effectiveness of HOTS-based teaching materials. In addition, this research has the potential to provide important insights for educators and practitioners in designing and implementing teaching strategies that are more effective and relevant to the needs of students in today's digital and global era.

2. METHODS

a. Research design

In this study, a quasi-experimental design was used with two groups of participants: the experimental group and the control group (Creswell & Creswell, 2017; Sugiyono, 2017). The quasi-experimental design was chosen based on practical and methodological reasons. First, in the context of higher education research, full randomization is often difficult or ethically unacceptable. Second, although they do not provide as stringent experimental controls as pure experimental designs, quasi-experimental designs can still provide valuable insights into the effects of interventions. The quasi-experimental design used was Nonequivalent Group Pretest-Posttest Control.

Tabel 1. Nonequivalent Group Pretest-Posttest Control Design

Group	Pre-test	Intervention	Post-test
A (Experimental)	O_1	X_1	O_3
B (Control)	O_2	X_2	O_4

Notes:
X_1: Application of HOTS-based Indonesian language teaching materials
X_2: Normal activities were used
O_1: Pre-test on the experimental group
O_2: Pre-test on the control group
O_3: Post-test on the experimental group
O_4: Post-test on the control group

In the context of this study, the experimental group received intervention in the form of Indonesian language teaching materials integrated with Higher Order Thinking Skills (HOTS). This teaching material stimulates and trains students' higher-order thinking skills, such as understanding, analyzing, evaluating, and creating new ideas based on the studied material. In contrast, the control group received Indonesian language instruction using traditional teaching materials normally used in the higher education environment.

b. Population and Sample

The population in this study consisted of second-semester 2022 Madrasah Elementary Teacher Education (PGMI) study program students from three different classes: class A (30 people), class B (30 people), and class C (25 people). These students had taken Indonesian language courses and were deemed to meet the criteria for participation in this study.

As a sample selection procedure, a purposive sampling technique was used. This technique was chosen because it allows researchers to deliberately select participants who are most likely to provide data that is relevant and consistent with research objectives (Purwanto et al., 2021). This study selected the sample based on specific criteria: students who had taken Indonesian language courses and came from the PGMI study program.

This consideration is based on the assumption that students with this background have relatively uniform initial knowledge and skills in Indonesian to provide a consistent basis for measuring the effects of interventions. The researcher also tried to ensure a balanced representation of students from each class in the research sample.

This study used two classes as research subjects: the experimental and control groups. Class A, which contains 30 students, was designated as the experimental group. This group received learning Indonesian with teaching materials based on Higher Order Thinking Skills (HOTS).

Meanwhile, Class B, consisting of 30 students, was designated the control group. The control group received Indonesian language instruction using traditional teaching methods and materials normally used in the higher education environment. The selection of this class was based on the objective of comparing the effectiveness of two different learning methods.

c. Instruments and Data Collection

This study used the instrument to collect data through a written test. The written test is designed to evaluate students' Higher Order Thinking Skills (HOTS) in the context of learning Indonesian. This test was given to students at the beginning (pre-test) and end (post-test) of the research period to see an increase in HOTS abilities after learning HOTS-based teaching materials. This test was given to both groups, experimental and control.

Data were collected at two points during the study: before and after applying HOTS-based teaching materials. The results of the initial (pre-test) and final (post-test) written tests were recorded and used as data for comparative analysis of students' HOTS abilities. The data collected was then analyzed to determine the effectiveness of HOTS-based teaching materials in learning Indonesian in tertiary institutions.

d. *Data analysis*

This study analyzed data from written tests and questionnaires using SPSS version 27 (Subando, 2021). First, data from the instrument is entered into SPSS to perform analysis prerequisite tests. The results help determine whether the data distribution follows a normal distribution pattern. The normality test was carried out using the Shapiro-Wilk method. Next, a homogeneity test was performed with Levene's Test to determine whether the variances within each group were the same. After ensuring that the data meet the assumptions of the t-test, an independent t-test is performed. The results of this t-test provide an overview of the effectiveness of HOTS-based teaching materials in learning Indonesian in tertiary institutions. This study used the t-test to compare the average written test scores between the experimental and control groups.

3. RESULTS AND DISCUSSION

The data processed through SPSS data analysis software version 27 has resulted in several important test stages. The first normality test was conducted using the Shapiro-Wilk method, a technique recommended to determine whether the data distribution follows a normal distribution pattern. The second stage in this process is homogeneity testing, which uses Levene's Test, which effectively determines the variance similarity among each group in a data set. After these two assumptions are met, the next step is to apply the independent t-test. This t-test compares the experimental and control groups' average written test scores and questionnaire responses. The results of this complex analysis process can be reviewed in the following dataset:

1) Normality test

Table 2. Normality test results

Tests of Normality

		Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Class	Statistic	df	Sig.	Statistic	df	Sig.
Indonesian language learning outcomes	Experimental class	.119	30	.200*	.926	30	.040
	Control class	.108	30	.200*	.966	30	.441

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Based on the results of the Shapiro-Wilk test for the experimental group, the p-value (0.040) is smaller than the commonly used significance level (α = 0.05). It shows sufficient statistical evidence to reject the null hypothesis (H0) that the data in the experimental group are normally distributed. In other words, the data in the experimental group do not follow a normal distribution.

In the control group, the p-value (0.441) is greater than the commonly used significance level (α = 0.05). It shows insufficient statistical evidence to support the rejection of the null hypothesis (H0) that the data in the control group are not normally distributed. In other words, the data in the control group tend to follow a normal distribution.

Overall, the interpretation results show that the experimental group does not have a normal distribution based on the results of the Shapiro-Wilk test, while the control group can be assumed to follow a normal distribution.

2) Homogeneity test

Table 3. Homogeneity test results

Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
Indonesian language learning outcomes	Based on Mean	.242	1	58	.625
	Based on Median	.244	1	58	.623
	Based on Median and with adjusted df	.244	1	52.239	.624
	Based on trimmed mean	.223	1	58	.639

Based on the results of the homogeneity test of variance using the Levene method, which was carried out in the Experiment and Control groups in the Indonesian language learning outcome variable, it was found that there was not enough statistical evidence to support the rejection of the null hypothesis (H0) that the variance of the data between the two groups was significantly different. The homogeneity of variance test results using several methods, such as those based on the mean, median, median with df adjustments, and trimmed mean, show a p-value greater than the commonly used significance level ($\alpha = 0.05$).

In this context, the interpretation results conclude that the data variance between the Experimental and Control groups can be considered homogeneous. The two groups have no significant difference in the data variability. It gives confidence that the differences observed in the results of learning Indonesian between the Experiment and Control groups are not caused by differences in data variance.

3) Test t-test

Table 4. Independent t-test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means						
									95% Confidence Interval of the Difference	
		F	Sig.	t	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
Indonesian language learning outcomes	Equal variances assumed	.242	.625	7.382	58	<.001	12.30000	1.66631	8.96452	15.63548
	Equal variances not assumed			7.382	55.852	<.001	12.30000	1.66631	8.96178	15.63822

Based on the t-test results, the p-value (0.000) is less than the commonly used significance level ($\alpha = 0.05$). It indicates sufficient statistical evidence to reject the null hypothesis (H0) that no significant difference exists in the means between the Experimental and Control groups. Also, the 95% confidence interval of the difference does not include zero, indicating statistical significance in this difference.

In the t-test results, the p-value obtained ($p < 0.05$) indicates a significant difference in the mean between the two groups. That is, the Experiment group which may receive a

different treatment or method, has significantly higher Indonesian language learning outcomes than the Control group, which may not receive a similar or different treatment. In addition, the 95% confidence interval of the mean difference does not include zero, indicating that the difference is large enough and should not be ascribed to mere chance. These results prove that the treatment or method applied to the Experiment group significantly impacts Indonesian language learning outcomes compared to the Control group.

In conclusion, the interpretation results show a significant difference between the average Indonesian learning outcomes between the Experimental and Control groups. It shows that the treatment or method applied to the experimental group positively improves learning outcomes compared to the control group.

This study investigated the differences in learning outcomes of Indonesian between the two groups, namely the Experimental group and the Control group. First, a normality test analysis was performed to examine the data distribution within each group. Based on the results of the Shapiro-Wilk test, it was found that the data in the experimental group did not follow a normal distribution ($p = 0.040$). Meanwhile, data in the control group tended to follow a normal distribution ($p = 0.441$). This finding indicates a significant difference in the data distribution between the two groups.

Next, a homogeneity of variance test was performed to evaluate whether there was a significant difference in the data variability between the Experimental and Control groups. Based on the results of the Levene test using the Levene method, there was no statistical evidence to support the rejection of the null hypothesis that the variance of the data between the two groups was significantly different ($p > 0.05$). It indicates that the data variability in the Experimental and Control groups can be considered homogeneous. Therefore, the observed differences in Indonesian learning outcomes between the two groups were not due to differences in data variance.

Finally, a t-test was conducted to compare the average Indonesian learning outcomes between the Experimental and Control groups. The t-test results showed a significant difference in the means between the two groups ($p < 0.05$). In addition, the 95% confidence interval for the mean difference does not include zero, indicating statistical significance. Thus, it can be concluded that the treatment or method applied to the Experiment group significantly impacted Indonesian learning outcomes, which is higher than the Control group.

This study proves that the Experimental and Control groups significantly differ in Indonesian learning outcomes. This difference can be seen from the different data distributions and the significant average difference between the two groups. These findings provide a better understanding of the effectiveness of the treatment or method applied to the Experiment group in improving Indonesian learning outcomes compared to the Control group. The intervention was conducted in the experimental group by applying Higher Order Thinking Skills-based Indonesian language instruction materials

(HOTS). This teaching material is designed to encourage students in the experimental group to think more critically, analytically and creatively in learning Indonesian.

The research that has been conducted shows the significant effect of the Higher Order Thinking Skills (HOTS) based learning approach in the educational context. It aligns with the findings in the study under Discussion, where the HOTS-based approach showed improvements in Indonesian learning outcomes. Studies conducted by Guswita (2021) revealed that implementing HOTS-based digital textbooks could significantly improve students' problem-solving abilities.

Further, research by Fitrianti & Husna (2021) described the positive effects of HOTS-based teaching materials in improving students' critical thinking and analytical skills. These results align with the findings in the research being reviewed, providing further support for the notion that HOTS can contribute to the development of higher-order thinking skills, which are essential in the learning process.

Finally, research by Herianto (2022) shows that HOTS-based learning can stimulate the development of various important skills such as communication, collaboration, critical and creative thinking, civic awareness and responsibility. These results align with this study's findings, which noted an increase in Indonesian learning outcomes in the group using the HOTS approach. Overall, these findings validate the relevance and effectiveness of the HOTS-based approach in learning Indonesian.

The results of this study are a sign that the application of Higher Order Thinking Skills (HOTS)-based Indonesian teaching materials significantly influence Indonesian learning outcomes. These findings indicate that a learning approach that encourages students to think at a higher level, such as critical, analytical, and creative thinking, can positively impact students' understanding and mastery of Indonesian.

In addition, the results of this study also show that HOTS-based teaching materials can be an effective alternative in improving learning outcomes compared to conventional teaching methods. Applying HOTS-based teaching materials can provide a higher challenge for students, encouraging them to think deeper, analyze critically, and apply Indonesian knowledge in complex contexts (Anderson et al., 2001; Kennedy, 2006). It indicates that this approach can produce better and more in-depth learning outcomes.

This study encourages educators and curriculum developers to integrate the HOTS approach into Indonesian language teaching materials. Thus, this study's results indicate that applying HOTS-based teaching materials can effectively improve Indonesian learning outcomes. In addition, the results of this study can also provide a basis for further research in this field and provide a better understanding of the effectiveness of HOTS-based teaching materials in the context of Indonesian language education.

The implications of the results of this study have a significant impact in the context of Indonesian language education. First, these findings show that applying Higher Order Thinking Skills (HOTS)-based Indonesian teaching materials can positively change

learning outcomes. HOTS-based teaching materials can provide students with a higher intellectual challenge, encouraging them to engage in deep thinking, critical analysis, and the application of knowledge in more complex contexts. This implication reinforces the importance of a learning approach that encourages students to think at a higher level, such as critical, analytical, and creative thinking, in learning Indonesian.

Moreover, the results of this study provide important implications for the development of the Indonesian language curriculum. Integrating the HOTS approach into teaching materials and curricula can enrich student learning experiences and ensure the curriculum includes components relevant to student needs (Wahid & Karimah, 2018). These implications encourage curriculum developers to structure and develop teaching materials that encourage higher-order thinking and allow students to apply their knowledge in more complex situations. It will enrich students' learning experiences, improve their understanding of Indonesian, and equip them with thinking skills relevant to real-world needs

Analysis of the study results showed that the experimental class had significantly higher scores than the control class in learning Indonesian. Several factors can explain this difference.

First, the intervention factor with teaching materials based on Higher Order Thinking Skills (HOTS) influences higher results in the experimental group. This intervention involves applying teaching materials designed to encourage higher-order thinking, such as critical, analytical, and creative thinking, in learning Indonesian (Wahid & Karimah, 2018). The challenging activities in this teaching material provide opportunities for students in the experimental group to develop more advanced and in-depth thinking skills, which contribute to better learning outcomes.

Second, the stimulus resulting from higher-order thinking may also factor in the difference in results between the two groups. HOTS-based teaching materials in the experimental group encourage students to engage in deeper thinking, critical analysis, and application of knowledge in complex contexts. Teaching methods that encourage group discussion, problem-solving, and projects provide opportunities for students to actively understand Indonesian subject matter (Endrayanto, 2021). Thus, this higher-order thinking stimulus plays a role in influencing better learning outcomes in the experimental group.

Third, students' motivation and active participation can also influence learning outcomes. Students tend to be more motivated to study seriously and actively. Interventions with HOTS-based teaching materials can increase student motivation because teaching materials are challenging and interesting. Students' active participation in Discussion, collaboration, and self-reflection also plays an important role in understanding and mastering Indonesian (Widyanto, 2021). Therefore, students' motivation and active participation in the experimental group contributed to higher learning outcomes.

Although these factors explain the differences in results between the experimental and control groups, other factors such as student characteristics, learning environment, and teaching methods must also be considered.

Based on this study's results, several actions need to be taken by universities in response to these findings. First, curriculum revision is an important step to take advantage of the results of this study. Universities can revise the Indonesian language course curriculum by integrating a teaching material approach based on Higher Order Thinking Skills (HOTS) (Sani, 2019). In this curriculum revision, universities can design teaching materials that encourage higher-order thinking, strengthen students' critical, analytical and creative thinking skills, and involve them in challenging and motivating activities. Thus, this curriculum revision will help improve the quality of learning Indonesian in tertiary institutions.

Second, lecturer training is an important measure in implementing the findings of this research. Universities can organize training and professional development for lecturers who teach Indonesian language courses. This training will strengthen lecturers' understanding and skills in integrating the HOTS approach into their teaching (Wijayanti et al., 2022). Lecturers will be given knowledge about HOTS concepts, strategies, and practical guidelines for designing learning that encourages students' higher-order thinking. With this training, universities can ensure that lecturers have the qualifications and skills to teach effective and relevant Indonesian.

Third, further research and development is an important step to take advantage of the results of this research. Universities can encourage lecturers and students to conduct further research on the effect of HOTS-based teaching materials on learning Indonesian (Widyanto, 2021; Wijayanti et al., 2022). This research can involve a more in-depth study of the influence of these teaching materials in a more specific context, as well as involving a wider population. In addition, universities can also encourage collaboration with other research institutions to develop innovations in Indonesian language teaching methods. By conducting continuous research and development, universities can continue improving the quality of Indonesian language education in the academic environment.

CONCLUSION

The most important finding of this study is that there is a significant difference between the experimental and control groups in learning Indonesian. The experimental group that received the intervention with teaching materials based on Higher Order Thinking Skills (HOTS) showed a significant increase in learning outcomes compared to the control group. These results prove that applying the HOTS approach to learning Indonesian can positively and significantly impact. These findings demonstrate the importance of considering teaching methods that involve higher-order thinking and encourage students to think critically, analytically, and creatively. The implication is that the HOTS approach can be an effective alternative to improving Indonesian learning outcomes.

This research provides significant empirical evidence regarding the effectiveness of using teaching materials based on Higher Order Thinking Skills (HOTS) in improving Indonesian learning outcomes. These findings provide a deeper understanding of the importance of designing teaching materials that encourage higher-order thinking and critical, analytical, and creative thinking skills in the context of learning Indonesian. The added value of this research lies in its contribution to developing approaches to learning Indonesian.

This study also has several limitations that must be considered in future research. First, this research was conducted on a limited scale with a sample of two groups. Given the limited number of samples, the results of this study may not be able to generalize to the wider population directly. Therefore, further research can involve a larger number of samples and more groups to strengthen the external validity of the research results. In addition, future research may involve measuring other variables that can affect learning outcomes, such as student motivation, learning styles, or lecturer characteristics. By including these additional variables.

REFERENCES

Aisyah, S., Noviyanti, E., & Triyanto, T. (2020). Bahan Ajar Sebagai Bagian dalam Kajian Problematika Pembelajaran Bahasa Indonesia. *Jurnal Salaka : Jurnal Bahasa, Sastra, dan Budaya Indonesia*, *2*(1), Article 1. https://doi.org/10.33751/jsalaka.v2i1.1838

Alimuddin, A., Juntak, J. N. S., Jusnita, R. A. E., Murniawaty, I., & Wono, H. Y. (2023). Teknologi Dalam Pendidikan: Membantu Siswa Beradaptasi Dengan Revolusi Industri 4.0. *Journal on Education*, *5*(4), Article 4.

Anderson, T., Howe, C., Soden, R., Halliday, J., & Low, J. (2001). Peer interaction and the learning of critical thinking skills in further education students. *Instructional Science*, *29*(1), 1–32. https://doi.org/10.1023/A:1026471702353

Creswell, J. W., & Creswell, J. D. (2017). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. SAGE Publications.

Dewi, Y., & Mikaresti, P. (2019). Pengembangan Bahan Ajar Mata Kuliah Strategi Pembelajaran Bahasa Indonesia dengan Metode Pikir Bareng dan Berbagi. *Pena : Jurnal Pendidikan Bahasa Dan Sastra*, *9*(1), Article 1. https://doi.org/10.22437/pena.v9i1.6914

Di Biase, R. (2019). Moving beyond the teacher-centred/learner-centred dichotomy: Implementing a structured model of active learning in the Maldives. *Compare: A Journal of Comparative and International Education*, *49*(4), 565–583. https://doi.org/10.1080/03057925.2018.1435261

Endrayanto, H. Y. S. (2021). *Strategi Menilai Keterampilan Berpikir Tingkat Tinggi (HOTS)*. PT Kanisius.

Falloon, G. (2020). From digital literacy to digital competence: The teacher digital competency (TDC) framework. *Educational Technology Research and Development*, *68*(5), 2449–2472. https://doi.org/10.1007/s11423-020-09767-4

Firman, Ahmad, A., & Anshari. (2021). Teaching Materials Development of Indonesian Language Based on Islamic Text in Islamic Universities. Dalam *Online Submission* (Vol. 9, Nomor 1, hlm. 1–9). https://eric.ed.gov/?id=ED613291

Fitrianti, E., & Husna, L. (2021). Mengembangkan Higher Order Thinking Skills (Hots) Mahasiswa dalam Pembelajaran Sastra Berbantuan Media Sosial. *Ekasakti Educational Journal*, *1*(1), Article 1. https://doi.org/10.31933/eej.v1i1.183

Guswita, R. (2021). Pengembangan Buku Ajar Digital Bahasa Indonesia Berbasis Hots untuk Meningkatkan Kemampuan Pemecahan Masalah Mahasiswa STKIP Muhammadiyahmuara Bungo. *Jurnal Basicedu*, *5*(5), Article 5. https://doi.org/10.31004/basicedu.v5i5.1496

Herianto, E. (2022). *Implementation of HOTS-Based Learning in Higher Education*. 61–71. https://doi.org/10.2991/978-2-494069-17-6_8

Ichsan, I. Z., Sigit, D. V., Miarsyah, M., Ali, A., Arif, W. P., & Prayitno, T. A. (2019). HOTS-AEP: Higher Order Thinking Skills from Elementary to Master Students in Environmental Learning. *European Journal of Educational Research*, *8*(4), 935–942.

Kennedy, R. (2006). In-Class Debates: Fertile Ground for Active Learning and the Cultivation of Critical Thinking and Oral Communication Skills. *Int J Teach Learn Higher Educ*, *19*.

Muhali, M. (2018). Arah Pengembangan Pendidikan Masa Kini Menurut Perspektif Revolusi Industri 4.0. *Prosiding Seminar Nasional Lembaga Penelitian Dan Pendidikan (LPP) Mandala*, *0*, Article 0. https://doi.org/10.1234/.v0i0.425

Purwanto, A., Asbari, M., Santoso, T. I., Sunarsi, D., Ilham, D., & Purwanto, A. (2021). *Education Research Quantitative Analysis for Little Respondents: Comparing of Lisrel, Tetrad, GSCA, Amos, SmartPLS, WarpPLS, and SPSS* (SSRN Scholarly Paper ID 3937210; Nomor ID 3937210). Social Science Research Network. https://papers.ssrn.com/abstract=3937210

Rahmiati, R., Arsyad, A., Yaumi, M., Asik, N., & Rasyid, M. N. A. (2019). The Development of Indonesian Language Teaching Materials Based on Knowledge Integration In Islamic Higher Education. *RETORIKA: Jurnal Bahasa, Sastra, Dan Pengajarannya*, *12*(2), Article 2. https://doi.org/10.26858/retorika.v12i2.9280

Ruwaida, H. (2019). Proses Kognitif dalam Taksonomi Bloom Revisi: Analisis Kemampuan Mencipta (C6) Pada Pembelajaran Fikih Di MI Miftahul Anwar Desa Banua Lawas. *Al-Madrasah: Jurnal Pendidikan Madrasah Ibtidaiyah*, *4*(1), Article 1. https://doi.org/10.35931/am.v4i1.168

Sani, R. A. (2019). *Pembelajaran Berbasis HOTS Edisi Revisi: Higher Order Thinking Skills*. Tira Smart.

Savitri, A., & Kusnarto. (2021). Pemanfaatan Game Edukasi Wordwall Sebagai Evaluasi Pembelajaran Bahasa Indonesia Secara Daring di Perguruan Tinggi. *ISoLEC Proceedings*, *5*(1), Article 1.

Sekwena, G. L. (2023). Active Learning Pedagogy for Enriching Economics Students' Higher Order Thinking Skills. *International Journal of Learning, Teaching and Educational Research*, *22*(3), Article 3.

Subando, J. (2021). *Teknik Analisis Data Kuantitatif Teori dan Aplikasi dengan SPSS*. Penerbit Lakeisha.

Sugiyono. (2017). *Metode Penelitian Kuantitatif, Kualitatif, dan R&D*. Alfabeta.

Wahid, A. H., & Karimah, R. A. (2018). Integrasi Higher Order Thinking Skill (HOTS) dengan Model Creative Problem Solving. *MODELING: Jurnal Program Studi PGMI*, *5*(1), Article 1.

Wena, I. M. (2020). Pembelajaran Berorientasi HOTS (Higher Order Thinking Skill) di Era Revolusi Industri 4.0 untuk Mewujudkan Generasi Indonesia Emas 2045. *Prosiding Mahasaraswati Seminar Nasional Pendidikan Matematika*. https://e-journal.unmas.ac.id/index.php/Prosemnaspmatematika/article/view/892

Widyanto, I. P. (2021). Manajemen Pembelajaran High Order Thinking Skills Di Perguruan Tinggi Keagamaan. *Prosiding Seminar Nasional IAHN-TP Palangka Raya*, *6*, Article 6. https://doi.org/10.33363/sn.v0i6.175

Widyawati, A., Dwiningrum, S. I. A., & Rukiyati, R. (2021). Pembelajaran ethnosciences di era revolusi industri 4.0 sebagai pemacu Higher Order Thinking Skills (HOTS). *Jurnal Pembangunan Pendidikan: Fondasi dan Aplikasi*, *9*(1), Article 1. https://doi.org/10.21831/jppfa.v9i1.38049

Wijayanti, W., Yunarti, S., & Harmaningsih, D. (2022). Proyeksi Masyarakat 5.0 Melalui Model Pembelajaran Berlandaskan Hots Di Perguruan Tinggi. *IKRA-ITH HUMANIORA : Jurnal Sosial dan Humaniora*, *6*(1), Article 1.