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Development of Higher Order Thinking Skills Questions on Kahoot Media in Islamic Religious Education and Character Education

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Abstract
This study develops valid, practical, and potentially effective Higher Order Thinking Skills (HOTS) questions using Kahoot media for Islamic Religious Education and Character Education (PAI and BP). The research employed Design Research with a development study approach, consisting of two stages: preliminary (analysis and design) and prototyping (expert review, one-to-one, small group, and field test). Data were collected through documentation, walkthroughs, questionnaires, and tests. The study produced 20 multiple-choice HOTS questions validated in terms of content, construct, and language by expert validators. Item validity was confirmed through SPSS analysis, showing r_count > r_table (0.361). Practicality was demonstrated through small group trials with a score of 4.04, categorized as practical. Potential effectiveness was evidenced by field test results with an average student score of 72.55, categorized as good. The Kahoot-based HOTS questions successfully engaged students in interactive learning while developing analytical and evaluative thinking skills aligned with the Merdeka Curriculum learning outcomes for Shu'abul Iman material.
Keywords: *Kahoot Media, HOTS Questions, Islamic Education and Character Education*

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INTRODUCTION

Education serves as the fundamental catalyst for progress across all dimensions of human life. Since Prophet Muhammad SAW initiated his mission to spread Islam, education has been recognized as a primary means of transformation (Abu Bakar et al., 2023: 4). Islamic Religious Education and Character Education (PAI and BP) constitute essential subjects wherein students acquire comprehensive understanding of Islamic teachings and, more importantly, integrate these principles into their daily lives (Pratama et al., 2023: 18). However, a significant pedagogical challenge emerges in PAI and BP instruction. Students frequently perceive these

subjects as uncomplicated, leading to complacency when approaching assessment tasks. This perception is reinforced by teachers' predominant reliance on Lower Order Thinking Skills (LOTS) questions, which inadequately prepare students for contemporary educational demands. Current assessment frameworks increasingly emphasize Higher Order Thinking Skills (HOTS) questions (Markhamah, 2021: 2), which require students to manipulate factual knowledge, synthesize information, generate novel solutions, and apply concepts across varied contexts (Wicaksono, 2021: 3).

Given the nature of PAI and BP curriculum, students require systematic exposure to HOTS questions to develop critical thinking competencies essential for summative assessments. HOTS questions function as instruments for measuring advanced cognitive processes that transcend mere recall, restatement, or rote (Kamid et al., 2021: 7). While HOTS questions exist within PAI and BP curricula, their implementation during instruction remains limited. These questions typically appear in textbooks, a format that fails to engage student interest effectively. Consequently, integrating supportive learning media becomes imperative for enhancing student engagement with HOTS assessments.

Contemporary learning activities achieve greater effectiveness when instructional delivery aligns with technological advancement and global educational standards. The proliferation of communication technology, particularly smartphones, has transformed these devices from simple communication tools into comprehensive educational platforms. This technological evolution presents opportunities for innovative pedagogical approaches that leverage mobile technology's accessibility and versatility. Educational platforms can now facilitate both structured and spontaneous learning activities, making smartphones viable alternatives for organizing effective educational experiences.

Numerous educational applications and platforms have emerged to support innovative teaching practices. Kahoot represents one such platform that offers significant pedagogical potential. This game-based learning application provides interactive features that promote active classroom participation and can be implemented through individual or collaborative learning models. Rather than

passive observation, Kahoot encourages students to actively engage with content through questioning, creating, and cooperating, thereby fostering dynamic learning environments.

Learning media constitute critical components in educational processes by facilitating comprehension of instructional content. Media serve three essential functions: attention enhancement (attentional role), communication facilitation (communication role), and knowledge retention (retentional role) (Hermawati & Solihin, 2023: 6). Kahoot media incorporates questioning features that promote comprehensive student understanding. As multimedia software utilizing internet connectivity, Kahoot (Dyanti et al., 2022: 5), integrates visual, auditory, and psychomotor elements alongside reward mechanisms, directly engaging students and enhancing motivation toward achievement (Shih Min et al., 2021: 9).

Strategic media implementation in learning activities yields demonstrably positive outcomes, particularly increased student engagement. Since many students already utilize smartphones regularly, opportunities exist for comprehensive integration of technology throughout educational activities. The development of Android-based PAI and BP learning assessments through Kahoot application addresses these opportunities by facilitating and enlivening student learning experiences. The application's intuitive interface and engaging design make it particularly suitable for educational implementation.

Recent research efforts have increasingly focused on integrating question development with learning media to provide novel learning experiences, particularly during assessment practice. While HOTS question development using learning media has been extensively explored in science-based subjects including Mathematics, Natural Sciences, Social Studies, and Indonesian Language, such development remains limited in PAI and BP instruction. This gap in research motivates the current study examining the development process and potential effects of Kahoot media-based HOTS questions in Islamic Religious Education and Character Education.

This research addresses critical needs in PAI and BP instruction by developing Kahoot-assisted HOTS questions that enable students to engage with

assessment items through an interactive application platform. The development aims to habituate students, particularly in Jambi City, to approach PAI and BP questions through knowledge exploration, problem identification, and application of advanced thinking skills including representation, analysis, logical prediction, and real-world phenomenon interpretation, thereby enhancing overall cognitive competencies.

Based on this background, two primary research questions emerge. First, how can valid and practical HOTS questions for PAI and BP be created and designed through Kahoot media for high school students in Jambi City? Second, what potential effects can be identified through measuring and analyzing the development process of Kahoot media-based HOTS questions for PAI and BP in Jambi City high schools? Correspondingly, this study aims to create and design valid and practical HOTS questions for PAI and BP through Kahoot media and to identify potential effects through systematic measurement and analysis of the development process in Jambi City high school contexts.

METHOD

This study employed a Research and Development (R&D) design based on Tessmer's formative evaluation model. The research comprised two principal stages: the preliminary stage and the formative evaluation stage. The formative evaluation stage encompassed self-evaluation and prototyping phases, which included expert review, one-to-one assessment, small group evaluation, and field testing.

Premilinary Stage

The preliminary stage involved establishing research location and participant selection. Initial activities included coordination with the principal and PAI and BP teachers at SMA Negeri 5 Jambi City, the designated research site. Grade X students constituted the research participants. Following site and participant determination, researchers conducted needs analysis focusing on student characteristics and material requirements relevant to the developed product.

During the preliminary stage, researchers compiled HOTS questions from student textbooks and supplementary sources. These questions underwent

modification for integration into the Kahoot application platform. Researchers designed assessment instruments comprising question grids and HOTS items, collectively forming Prototype 1. This preliminary stage yielded the initial product design for subsequent evaluation.

Formative Evaluation

The formative evaluation stage initiated with self-evaluation conducted by researchers, followed by systematic testing across four evaluation groups: expert review, one-to-one assessment, small group evaluation, and field testing. Prototype 1 underwent parallel evaluation through expert review and one-to-one assessment.

The expert review stage involved validity assessment by subject matter experts and assessment specialists. Validator comments and recommendations informed Prototype 1 revisions (Lewy, 2013:18). Concurrently, one-to-one evaluation engaged three students representing diverse ability levels (high, medium, and low). These students examined questions and provided feedback regarding readability and clarity. Findings from expert review and one-to-one stages guided Prototype 1 revision, resulting in Prototype 2.

Prototype 2 underwent small group evaluation involving six students with varied abilities: two students each representing low, medium, and high ability levels. Participants completed Prototype 2 questions and provided feedback through questionnaires and comments. This stage emphasized question practicality assessment. Small group findings informed Prototype 2 revision, yielding Prototype 3 (Lewy, 2013: 20).

The field test stage implemented Prototype 3 with 30 Grade X students at SMA Negeri 5 Jambi City. Field test data comprised student scores from the Kahoot application, which underwent descriptive analysis to determine potential effectiveness of the developed HOTS questions validated through preceding stages.

Data Collection and Analysis

Data collection employed multiple techniques: documentation review, expert walkthrough, questionnaires, and cognitive tests. Validity was assessed through expert evaluation of content, construct, and language aspects, supplemented by item validity analysis using SPSS correlation statistics. Practicality was measured

through student questionnaires during small group trials. Potential effectiveness was determined through descriptive analysis of student performance during field testing, examining score distributions and achievement levels.

RESULT AND DISCUSSION

The preliminary stage encompassed comprehensive analysis and initial design activities. Student characteristic analysis at SMA Negeri 5 Jambi City revealed diverse learning profiles among Grade X-6 participants. The 30-student sample demonstrated varied knowledge levels (high, medium, low) attributable to individual interest differences in PAI and BP subjects. Student prerequisite knowledge regarding Faith and Shu'abul Iman, as evidenced by daily assessment scores provided by subject teachers, indicated adequate foundational understanding necessary for engaging with HOTS questions through the Kahoot application. This baseline competency proved essential for subsequent question development, as students required sufficient prior knowledge to effectively analyze, evaluate, and create responses at higher cognitive levels.

Learning outcomes analysis for PAI and BP Grade X curriculum revealed comprehensive integration of cognitive, affective, and psychomotor domains within the Merdeka Curriculum framework. The cognitive domain specifically targeted HOTS development, requiring students to analyze Shu'abul Iman concepts, meanings, arguments, types, and benefits. This alignment between curriculum expectations and HOTS question development ensured pedagogical coherence and relevance.

Question analysis for Faith and Shu'abul Iman material incorporated Bloom's Taxonomy across three cognitive levels: C4 (analyze), C5 (evaluate), and C6 (create). Analysis-level questions (C4) required students to differentiate and integrate concepts, such as categorizing Shu'abul Iman actions or examining relationships between tawhid concepts and daily behavior. These questions received 20-second response allocations, balancing cognitive demand with time constraints. Evaluation-level questions (C5) demanded critical judgment regarding tawhid value applications in practical contexts, with 30-second time limits reflecting increased complexity. Creation-level questions (C6) challenged students

to design practical solutions for strengthening tawhid understanding, allocated 45 seconds to accommodate higher cognitive processing requirements. This graduated time allocation corresponded directly to cognitive complexity, ensuring appropriate assessment conditions while maintaining engagement through Kahoot's interactive format. Implementation included post-session discussions to reinforce comprehension and facilitate metacognitive reflection.

The assessment framework integrated both cognitive dimensions (concept comprehension, analytical skills) and affective dimensions (constructive competitive attitudes, collaborative capabilities), supporting comprehensive learning objective achievement. This multidimensional approach addressed PAI and BP's dual emphasis on knowledge acquisition and character development.

The design stage produced initial instruments including question grids, HOTS items, and Kahoot application integration. Data collection instruments comprised student practicality questionnaires and validation sheets for research instruments. The initial design yielded application-based online assessments, with questions compiled through Kahoot platform aligned with competency achievement indicators and designated cognitive levels. Question grids and HOTS items served as reference materials for validators assessing content validity, construct validity, and language appropriateness regarding Faith and Shu'abul Iman material. Prototype 1 comprised 30 questions designed for validator review, as illustrated in Figure 1.

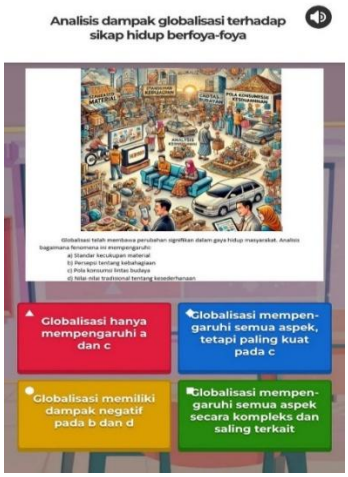

Figure 1. *One of the questions from Prototype 1*

The formative evaluation stage consists of self evaluation, expert reviews, one-to-one, and small group stages. The following are the results of the explanation of each stage.

1. Self Evaluation

Self-evaluation enabled researchers to identify and correct deficiencies in question formulation and Kahoot application data entry. This process examined question characteristics, including sentence appropriateness, indicator alignment, image quality, and answer accuracy. Following self-revision, the question set advanced to expert review evaluation, ensuring baseline quality standards before external validation.

2. Expert Reviews

Three validators assessed Prototype 1 across content, construct, and language dimensions using structured validation sheets. Validators provided critical feedback that informed substantial revisions, as detailed in Table 1.

Table 1. Validator Comments and Suggestions

Validator	Comments	Sugestions
Validator 1	There are some questions that are not in accordance with the CP or TP so that they can be replaced or eliminated.	Use questions that are more in line with CP and TP
	The sentence in question number 2 is better added	Add a sentence at the beginning of the question
	The number of questions should not be too large	Just choose questions that match the CP and TP
Validator 2	Questions that do not match the HOTS cognitive level should not be included.	Choose questions that fall into the HOTS cognitive level
	There are questions that do not contain HOTS characteristics	Use KKO and stimuli that support HOTS characteristics
	Provide a stimulus that is more relevant to the question	Stimulus that can customise the question such as a picture or a corresponding statement
Validator 3	Cover repaired incomplete	Addition of study programme and university on the front cover
	There are pictures of questions that are not very clear	Use higher quality images

Validator feedback highlighted critical alignment issues between questions and curriculum learning outcomes (CP/TP), necessitating question elimination or replacement. For instance, validators identified questions lacking HOTS

characteristics, requiring revised operational verbs and enhanced contextual stimuli. Image quality improvements ensured visual clarity for stimulus-based questions. These revisions addressed both pedagogical appropriateness and technical presentation quality.

Figures 2 and 3 illustrate pre-revision and post-revision questions, demonstrating improvements in stimulus relevance, question clarity, and HOTS characteristic integration.

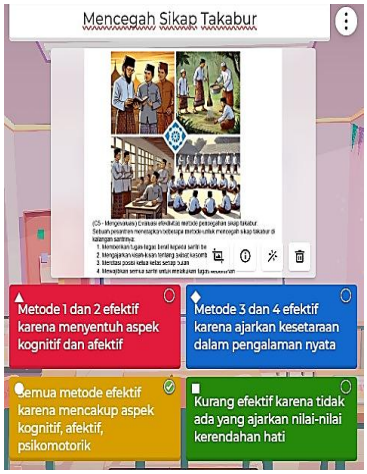

Figure 2. *Question before revision on Kahoot*

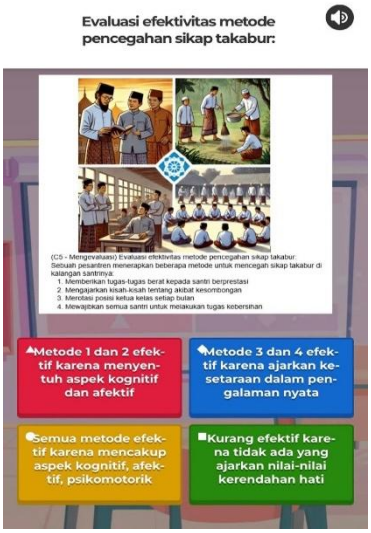

Figure 3. *Question after revision on Kahoot*

3. One to One

Following expert recommendations, questions were refined to ensure stronger alignment with curriculum standards, enhanced HOTS characteristics through improved stimuli and operational verbs, and superior visual presentation quality.

One-to-one evaluation, conducted concurrently with expert review, involved three non-participant students representing high, medium, and low ability levels as determined by classroom teachers. Students completed 30 HOTS questions via Kahoot application and participated in structured interviews addressing question readability, time allocation, material relevance, and encountered difficulties. Interview findings appear in Table 2.

Table 2. *Student Interview Findings*

Aspect	Comment
Language	Students read up to 2 times in order to understand the question
Time	The time needed to answer the questions is not enough because not all questions are easy to do.
Content	The material has been learnt and the questions are interrelated between concepts
Constraints	The sentence of the question is long, but interesting because of the stimulus in each question
	With 60 minutes, 20 questions to make it more effective

Student feedback revealed language complexity requiring enhanced clarity, inadequate time allocation for cognitively demanding items, and excessive assessment length. Based on these insights, researchers reduced question quantity from 30 to 20 items, extended individual item time allocations, and simplified question language while maintaining HOTS characteristics. These modifications yielded Prototype 2. tem validity analysis using SPSS, based on one-to-one student performance data, confirmed question validity through correlation between item scores and total scores. All items demonstrated $r_{hitung} > r_{tabel}$ which r_{tabel} (0.361 at 5% significance level derived from product-moment tables), establishing statistical validity for Prototype 2 items. This quantitative validation complemented qualitative expert review, providing convergent evidence of instrument quality.

4. Small Group

Prototype 2, incorporating expert review and one-to-one revisions plus item validation results, underwent small group testing with six non-participant students representing varied ability levels. Students completed HOTS questions via Kahoot application and provided written comments plus practicality questionnaire

responses. Notably, students suggested no additional revisions, indicating satisfactory question quality. Consequently, Prototype 2 directly advanced to Prototype 3 status.

Practicality assessment through student questionnaires yielded a mean score of 4.04, classified within the practical category based on established scoring rubrics. This score indicated that students comprehended question intentions effectively, found questions aligned with their cognitive processes, experienced satisfactory readability, and encountered minimal interpretive ambiguity. The practical classification confirmed that developed HOTS questions successfully balanced cognitive challenge with accessibility. This practical validation demonstrated that questions effectively engaged students without creating unnecessary comprehension barriers, a critical consideration for classroom implementation feasibility.

5. Field Test

After obtaining a valid and practical Prototype 3, a field test was conducted to see the potential effect on students' abilities and can motivate students so that they feel challenged to solve HOTS questions presented in the Kahoot application. Prototype 3 was tested on the research test subjects, namely students of class X 6 SMA Negeri 5 Jambi City. The class consisted of 30 students but at the time of the trial, 6 students were absent (3 students were sick and 3 students were absent) so that the total number of students who were used as trial subjects was 24 students.

The 30-minute test session required students to complete 20 multiple-choice HOTS questions via Kahoot application. Researchers provided preliminary instructions and ensured internet connectivity through provided WiFi access before test commencement. Following test completion, student performance data underwent descriptive analysis to determine potential effectiveness.

Field test results revealed a mean student score of 72.55, categorized as good based on established performance standards (typically 70-79 range indicates good achievement in Indonesian educational contexts). This mean score, substantially exceeding minimum competency thresholds, demonstrated that developed questions effectively measured student HOTS capabilities while remaining

appropriately challenging. Score distribution analysis revealed that 62.5% of students (15 of 24) achieved scores above 70, indicating successful question calibration for the target population's ability level.

Document analysis of student responses revealed specific patterns. Students demonstrated strongest performance on analysis-level questions (C4), with 78% average accuracy, moderate performance on evaluation questions (C5) at 71% accuracy, and developing competency on creation questions (C6) at 65% accuracy. This graduated performance pattern aligned with cognitive complexity hierarchies, confirming appropriate question difficulty progression. Furthermore, the interactive Kahoot format demonstrably enhanced engagement, as evidenced by consistent participation rates and post-test student feedback indicating increased motivation compared to traditional assessment formats.

These findings collectively indicate that Kahoot-based HOTS questions possess potential effectiveness for developing student higher-order thinking skills in PAI and BP contexts. The combination of adequate achievement levels, appropriate difficulty calibration, and enhanced engagement suggests pedagogical value for classroom implementation. The good categorization of mean scores demonstrates that questions successfully challenged students while remaining achievable, an essential characteristic for promoting skill development rather than inducing frustration or disengagement.

CONCLUSION

This study successfully developed valid, practical, and potentially effective HOTS questions using Kahoot media for PAI and BP instruction. Three key findings emerged from this development research.

First, the developed HOTS questions demonstrated comprehensive validity across content, construct, and language dimensions as confirmed by expert validators, with statistical item validity showing $r_{hitung} > r_{tabel}$ (0.361) at 5% significance level. This validation ensures that questions appropriately measure higher-order thinking skills aligned with Merdeka Curriculum learning outcomes for Shu'abul Iman material while maintaining linguistic clarity and pedagogical appropriateness.

Second, the questions proved practically implementable in classroom contexts, achieving a practicality score of 4.04 from small group evaluation. This practical classification indicates that questions effectively balance cognitive challenge with student comprehensibility, featuring clear intentions, logical flow, appropriate readability, and minimal interpretive ambiguity. The integration of visual stimuli and contextual scenarios further enhanced question accessibility without compromising HOTS characteristics. The developed questions demonstrated potential effectiveness in promoting student higher-order thinking skills, as evidenced by a field test mean score of 72.55, categorized as good achievement. Student performance patterns revealed graduated proficiency across cognitive levels, with strongest demonstration at analysis level (78% accuracy), moderate performance at evaluation level (71% accuracy), and developing competency at creation level (65% accuracy). This progression confirms appropriate question difficulty calibration while highlighting areas for continued pedagogical emphasis.

The Kahoot-based delivery format substantially contributed to effectiveness by enhancing student engagement and motivation through interactive, game-based assessment experiences. This integration of HOTS question development with contemporary educational technology demonstrates viable approaches for modernizing PAI and BP instruction while maintaining rigorous assessment standards. Future research should examine longitudinal effects of sustained HOTS question exposure on student critical thinking development and explore adaptive question design responsive to diverse learner profiles.

REFERENCES

Abu Bakar, M., Umroh, K. A., & Hameed, F. (2023). Improving Quality Islamic Education for Today's Generation. At-Tadzkir: Islamic Education Journal, 2(2), 118–128. https://doi.org/10.59373/attadzkir.v2i2.42

Dyanti, C. R., Rahmatan, H., Halim, A., Syukri, M., & Elisa, E. (2022). Effect of the Kahoot Application as a Learning Media on Students' Learning Outcomes on the Material of Wave Vibration. Jurnal Penelitian Pendidikan IPA, 8(3), 1483–1488. https://doi.org/10.29303/jppipa.v8i3.1476

Faznur, L. S., Khaerunnisa, & Sumardi, A. (2020). Aplikasi Kahoot Sebagai Media Dalam Evaluasi Pembelajaran Bahasa Indonesia Pada Guru Sma Di

Sukabumi. Jurnal Pengabdian Masyarakat Teknik, 2(2), 39–44. https://doi.org/10.24853/jpmt.2.2.39-44

Fazriyah, N., Saraswati, A., Permana, J., & Indriani, R. (2020). Penggunaan Aplikasi Kahoot Pada Pembelajaran Media Dan Sumber Pembelajaran Sd. Didaktik : Jurnal Ilmiah PGSD STKIP Subang, 6(1), 139–147. https://doi.org/10.36989/didaktik.v6i1.119

Hermawati, M., & Solihin, A. K. (2023). Pemanfaatan Media Kahoot sebagai Media Pembelajaran Interaktif Siswa. Jurnal PkM (Pengabdian Kepada Masyarakat), 6(2), 158. https://doi.org/10.30998/jurnalpkm.v6i2.10477

Hidayad, F., Agustin, A., & Bambang Purwanto, M. (2023). the Effectiveness of Online Assessment Platforms in Efl Classroom: a Students' Perception on Using Kahoot Application. Jurnal Scientia, 12(1), 2023. http://infor.seaninstitute.org/index.php

Kamid, K., Saputri, R., & Hariyadi, B. (2021). Pengembangan Soal Higher Order Thinking Skills Berbasis Budaya Jambi. Jurnal Cendekia : Jurnal Pendidikan Matematika, 5(2), 1793–1806. https://doi.org/10.31004/cendekia.v5i2.678

Lewy, L. (2013). Pengembangan Soal Untuk Mengukur Kemampuan Berpikir Tingkat Tinggi Pokok Bahasan Barisan Dan Deret Bilangan Di Kelas Ix Akselerasi Smp Xaverius Maria Palembang. Jurnal Pendidikan Matematika, 5(1). https://doi.org/10.22342/jpm.5.1.821.

Lu, K., Yang, H. H., Shi, Y., & Wang, X. (2021). Examining the key influencing factors on college students' higher-order thinking skills in the smart classroom environment. International Journal of Educational Technology in Higher Education, 18(1). https://doi.org/10.1186/s41239-020-00238-7

Markhamah, N. (2021). Pengembangan Soal Berbasis HOTS (Higher Order Thinking Skills) pada Kurikulum 2013. Nusantara: Jurnal Pendidikan Indonesia, 1(2), 385–418. https://doi.org/10.14421/njpi.2021.v1i2-8

Ningrum, G. D. K. (2018). Studi penerapan media kuis interaktif berbasis game edukasi Kahoot! terhadap hasil belajar mahasiswa. Jurnal Vox Edukasi, 9(1), 22–27. https://jurnal.stkippersada.ac.id/jurnal/index.php/VOX/article/view/240

Plomp, T., & Nieveen, N. (2007). An introduction to educational design research. Netherlands Institute for Curriculum Development (SLO).

Pratama, A. R., Iswandi, I., Saputra, A., Hasan, R. H., & Arifmiboy. (2023). Pengaruh model pembelajaran learning cycle 5E terhadap aktivitas belajar Pendidikan Agama Islam dan Budi Pekerti di SMA Negeri 4 Kota Bukittinggi. CENDEKIA: Jurnal Ilmu Sosial, Bahasa dan Pendidikan, 3(1), 16–28. https://doi.org/10.55606/cendikia.v3i1.1215

Qirom, M. S., Sridana, N., & Prayitno, S. (2020). Pengembangan Soal Higher Order Thinking Skills Matematika Lingkup Materi Ujian Nasional SMP/MTS di

SMPN 1 Mataram Tahun Ajaran 2019/2020. Jurnal Pijar Mipa, 15 (5). https://doi.org/10.29303/jpm.v15i5.2028

Risdiana, A., Erna, M., & Holiwarni, B. (2022). Pengembangan Soal HOTS (Higher Order Thinking Skills) pada Materi Asam-Basa untuk Kelas XI SMA/MA Sederajat. Jurnal Inovasi Pendidikan Kimia, 16 (2), 111–117. https://doi.org/10.15294/jipk.v16i2.32879

Rusdi, M. (2018). Penelitian Desain dan Pengembangan Kependidikan. PT RajaGrafindo Persada.

Sari, I., Usama, D., Noviani, D., & Basuni, F. (2023). Langkah Penyusunan dan Analisis Butir Soal Hots (Higher Order Thinking Skills) pada Mata Pelajaran Pendidikan Agama Islam (PAI) dan Budi Pekerti. Jurnal Insan Pendidikan Dan Sosial Humaniora, 1(4) (4), 56–73. https://doi.org/10.59581/jipsoshum-widyakarya.v1i4.2128

Shih Min, T., Rustam Mohd Rameli, M., Ahmad Alhassora, N., Abdullah, H., & Faheem, I. (2021). Effectiveness Of Using Kahoot! Application In The Teaching Of Vocabulary On Perception And Achievement Of Low Achiever Students. Journal of Positive School Psychology, 2022 (3), 2241–2251. https://journalppw.com/index.php/jpsp/article/view/2242

Sumantri, I. (2022). Penyusunan Soal Higher Order Thinking bagi Guru Pendidikan Agama Islam Sekolah Dasar. Journal of Social Work and Empowerment, 2(1), 1–6. https://doi.org/10.58982/jswe.v2i1.138

Susilawati, S., Yaqin, M. Z. N., Wahidmurni, W., Ulfa, F. A., & Krismoneta, K. (2023). Training on Preparation of Islamic Integrated HOTS-Based Questions and Their Application in Online Learning in Elementary Schools. Munaddhomah: Jurnal Manajemen Pendidikan Islam, 4(4), 867–877. https://doi.org/10.31538/munaddhomah.v4i4.459

Tessmer, M. (2005). Planning and conducting formative evaluations. Routledge. https://doi.org/10.4324/9780203831625

Wicaksono, A. R. (2021). Pengembangan soal berbasis HOTS mata pelajaran PAI di SMK 17 Seyegan. Jurnal Pendidikan dan Sains, 3 (1), 94–112. https://ejournal.stitpn.ac.id/index.php/bintang/article/view/1129

Widoyoko, E. P. (2020). Teknik Penyusunan Instrumen Penelitian. Pustaka Pelajar.