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Development of Rukhsah Learning Application Based on SAC (Smart Apps Creator) to Improve Students' Argumentation Skills

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ABSTRACT
This study aims to develop the Rukhsah Learning Application based on Smart Apps Creator (SAC) as a digital learning innovation that can improve students' argumentation skills. Through the Research and Development (R&D) approach with the ADDIE (Analysis, Design, Development, Implementation, and Evaluation) development model, this study was conducted at MTs Muhammadiyah 2 Jenangan Ponorogo involving 36 students as samples through random sampling techniques. The focus of the study was directed at the aspects of validation, practicality, and effectiveness of the developed application. Data collection was carried out through questionnaires and argumentation skills tests, then analyzed descriptively quantitatively and qualitatively. In addition, the effectiveness of the application was tested statistically using the Paired Sample T-Test and Cohen's d. The results of the study showed that the development of the Rukhsah application was proven to be valid and practical, and very effective in improving students' critical thinking and argumentation skills. The Rukhsah application obtained a validity level of 92% with a very valid category, and a practicality of 86% which was classified as very practical. The effectiveness test showed an increase in students' argumentation skills with a Cohen's d value of 5.541, which is in the large effect category. This finding confirms that the SAC-based Rukhsah Application is worthy of being used as an effective and innovative learning media in supporting students' critical thinking skills.

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INTRODUCTION

Argumentation ability is one of the important thinking skills in education, especially in developing students' critical and analytical thinking skills. Argumentation is not just about conveying opinions, but also involves the process of constructing logical arguments based on facts, evidence, and strong reasons.[1]. In the world of education, argumentation skills can equip students with the ability to think more deeply, defend their opinions, and evaluate different views objectively.[2] Argumentation skills play a very important role in shaping students' critical thinking patterns and play a major role in developing high-level thinking competencies, such as analysis, synthesis, and evaluation of existing information. Argumentation is a structured process for making claims, providing evidence to support claims and criticizing them. Based on the Toulmin Argumentation Pattern (TAP) argumentation model, the quality of an argument consists of six components, including: claim, data, warrant, backing, rebuttal, and qualifier.[3]

In the implementation of the learning curriculum, the development of argumentation skills often does not receive adequate attention. In fact, the ability to argue is one of the critical thinking skills that is important for students to have. Many students have difficulty in constructing logical, structured, and relevant arguments, especially when faced with complex problems or differences in perspective. This condition indicates the need for a learning approach that is specifically designed to train and improve students' argumentation skills systematically and contextually.[4] One of the obstacles that often arises is the low courage of students in expressing their opinions openly, as well as the difficulty in forming strong and convincing arguments. This is caused by various factors, such as lack of self-confidence, lack of understanding of good argument structure, or even negative experiences in the past when they tried to speak in public. Students who rarely participate in discussions feel pressured when asked to speak

[1] Silvia Delvi Hardini and Heffi Alberida, "Analysis of Students' Argumentation Ability," *Biodidactica: Journal of Biology and Its Learning* 17, no. 1 (2022): 93–99.

[2] Tafarrosa aqda Miena Asyafin et al., "The Influence of Android-Based Learning Media "SIG ASIK" on High School Students' Argumentation Skills" Geography Learning Magazine 7, no. 1 (2024): 104–13.

[3] Yunita Rahayu, Suhendar Suhendar, and Jujun Ratnasari, "Students' Argumentation Skills on Motion System Material of Senior High Schools in Sukabumi Regency-Indonesia," *Biodik* 6, no. 3 (2020): 312–18, https://doi.org/10.22437/bio.v6i3.9802.

[4] Ismiatul Zaroh, Muntholib, and Ridwan Joharmawan, "Implementation of Scientific Argumentation Assessment Instruments for Reaction Rate Material," *Orbital: Journal of Chemical Education* 6, no. 1 (2022): 78–90, https://doi.org/10.19109/ojpk.v6i1.12191.

in front of classmates.[5] Therefore, a more innovative and interactive approach in learning is needed to hone students' argumentation skills.

One of the innovative approaches that can be applied is the development of technology-based learning applications that are specifically designed to improve students' argumentation skills. Learning apps are an effective platform for students to practice crafting arguments, responding to dissent, and building critical thinking through varied activities, such as case simulations, interactive quizzes, and digital discussions.[6] By utilizing interactive and fun media, the learning process becomes more dynamic and encourages active student participation. More than just understanding theory, students are trained to apply it in real-world circumstances, so that their argumentation skills develop gradually but significantly.[7] Through this approach, technology is not only a tool, but also a strategy in creating more contextual, reflective, and meaningful learning.[8]. One form of technological innovation that can be used is Smart Apps Creator (SAC), which is an application development platform that can be used by educators to create learning applications without the need for complicated programming skills.

As research conducted by Lasma Ivana Maria Hutasoit and Syawal Gultom shows that teaching materials based on interactive media using applications are able to improve student communication and are effective in learning.[9] Qoulan Syadida and Yeni Erita in their research also explained that the Development of Learning Media Using the Smart Apps Creator Application is valid and practical to be used in learning with a percentage of validity 89.1% and practicality 90.6% .[10]

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[5] Nur Aura Ladistya Novanda, Supeno, and Aris Singgih Budiarso, "Development of Ethnoscience-Based Student Worksheets to Improve Junior High School Students' Scientific Argumentation Skills in Science Learning."

[6] Sri Suryaningsih, "Padlet Media Design Based on Bima Local Literature to Improve Student Writing Skills," *Paedagogia: Journal Education* 13, no. 2 (2024): 253–68, https://doi.org/10.24239/pdg.Vol11.Iss1.584.

[7] Fidiani Fidiantara, Abdul Wahab Jufri, and Gito Hadiprayitno, "Development of Android-Based Learning Materials Integrated with Logic Games," *Scientific Journal of Educational Professions* 7, no. 3 (2022): 1086–97, https://doi.org/10.29303/jipp.v7i3.741.

[8] Yovi Carina Zenaida, Kharisul Wathani, and Sugiyar, "Development of Google Sites-Based Learning Media in Improving Writing Skills on Da'Wah, Lecture, and Tablighi Materials in Class Xi of Vocational High School," *Proceedings of Integrative Science Education Seminar (PISCES)* 3, no. 1 (2023): 153–65, https://prosiding.iainponorogo.ac.id/index.php/pisces/article/view/1082.

[9] Lasma Ivana Maria Hutasoit and Syawal Gultom, "Development of Interactive Media-Based Teaching Materials Using Macromedia Flash Applications to Improve Mathematical Communication Skills at Gema Buwana Middle School," *Tabusai Education Journal* 7, no. 1 (2023): 543–51.

[10] Qoulan Syadida, "Development of Learning Media Using Smart Apps Creator Application in Integrated Thematic Learning for Grade IV Elementary School," *Journal of Practice Learning and Educational Development* 2, no. 1 (2022): 17–26, https://doi.org/10.58737/jpled.v2i1.31.

Superiority main from Smart Apps Creator is convenience access and creation application without need skill technical in programming.[11] Teachers, educators, or developers who don't own background behind technical can with easy learn and master method using SAC in time short. [12] This platform use drag-and-drop approach that allows user For add various element like text, images, and multimedia to in application only with shift and place components this is open opportunity for more Lots party For participate in development application learning, without hindered by limitations technical. SAC offers various feature interactive that can enrich experience Study students.[13] SAC also supports making multi-platform applications, which means application created can accessed in various system operations, such as Android and iOS. The diversity of these platforms ensure application learning outcomes can used by various circles student with different devices.[14]

Development application learning Rukhsah based on SAC aims For create learning media that is not only serve theory in a way passive, but also giving room for student For train and develop skills argumentation.[15] This application is designed to provide a fun and interactive learning experience, which is expected to motivate students to think critically and present their arguments in a structured way. Through this application, students can participate in various activities that stimulate their ability to compose, develop, and defend arguments effectively, both in writing and orally. The SAC based Rukhsah application is designed to facilitate argumentation learning in a more interesting way and can be accessed anytime and anywhere. [16] Students are not confined to a specific time or place to practice and develop their argumentation skills. They can access the app outside of formal class hours, providing much-needed flexibility in learning in this digital age. The SAC based Rukhsah app also provides a more personalized and adaptive learning experience. In this app-based learning, students are trained in argumentation in simulated situations, to test their ability to formulate logical arguments and defend their opinions in discussions, and provide them with

[11] Nasir et al., "Design of Practical Arts Learning Media Based on Smart Apps Creator," *Journal of Teacher Studies and Learning* 5, no. 3 (2022): 226–32, https://doi.org/10.30605/jsgp.5.3.2022.1884.

[12] Husnul Khotimah, Muhammad Nawir, and Sadriana Ayu, "The Effect of Android-Based Learning Using Smart Apps Creator (SAC) on Students' Integrated Science Interest," *Didaktika : Journal Education* 17, no. 1 (2023): 71–82, https://doi.org/10.30863/didaktika.v17i1.4421.

[13] Syadida, "Development of Learning Media Using Smart Apps Creator Application in Integrated Thematic Learning for Grade IV Elementary School."

[14] Ronal Sagala and Malani Simanungkalit, "Increased Interest in Learning Through Smart Apps Creator," *EDUKASIA: Journal Education and learning* 3, no. 3 (2022): 845–50, https://doi.org/10.62775/edukasia.v3i3.205.

[15] Nasir et al., "Design of Practical Arts Learning Media Based on Smart Apps Creator."

[16] Khotimah, Nawir, and Ayu, "The Effect of Android-Based Learning Using Smart Apps Creator (SAC) on Students' Integrated Science Interest."

opportunities to learn from different perspectives and develop their critical thinking skills.[17]

Thus, this research is very important to be conducted because the application of technology in argumentation learning can have a significant impact, especially in terms of increasing student engagement and making learning more flexible. With this developed application, students are more active in practicing and developing argumentation skills. Through research on the development of SAC-based learning applications, it is hoped that new, effective ways can be found in honing students' argumentation skills, as well as making a real contribution to learning innovation in the digital era. In addition, this application is also expected to introduce a learning model that is more adaptive and responsive to the needs and developments of existing technology, so as to be able to overcome the challenges of conventional learning which is often limited in providing a deep and adequate learning experience.

Methods

This is type study development or Research and Development (R&D)[18] with referring to on the model ADDIE development is Analysis, Design, Development, Implementation, and Evaluation.[19] The ADDIE model was chosen in the development of this media because it is already common and often used in the development of learning media and is widely known.[20] The stages of ADDIE research and development can be seen in Figure 1 as follows:

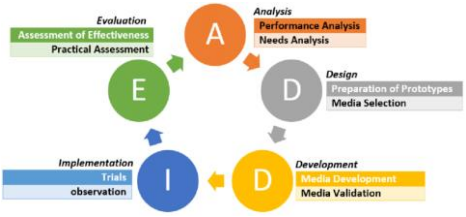

Figure 1. ADDIE Research and Development Stages

[17] Fidiantara, Jufri, and Hadiprayitno, "Development of Android-Based Teaching Materials Integrated with Logic Games."

[18] Made Giri Pawana, Naswan Suharsono, and I Made Kirna, "Development of Project-Based Interactive Multimedia Using the ADDIE Model on Web Programming Material for Grade X Students of Even Semester at SMK Negeri 3 Singaraja," *Indonesian Journal of Learning Technology* 6, no. 1 (2016).

[19] Retno Widyaningrum and Leni Nurul Izzati, "Development of Student Worksheets (LKPD) Based on Critical Thinking on the Material of Lust and Desire," *MA'ALIM: Journal of Islamic Education* 4, no. 2 (2023): 271–95, https://doi.org/10.21154/maalim.v4i2.8365.

[20] Fidiantara, Jufri, and Hadiprayitno, "Development of Android-Based Teaching Materials Integrated with Logic Games."

The sample selection in this study used random sampling, namely students of class VII B MTs Muhammadiyah 2 Jenangan Ponorogo which amounted to 36 students. In this study, 3 expert validators were involved, namely 1 lecturer and 2 teachers as media experts, material experts and language experts. The involvement of lecturers and teachers as expert validators aims to provide a thorough assessment of the quality and effectiveness of the developed learning media.

In the data analysis process, descriptive statistical techniques were used to calculate the average expert validation score, as well as the responses given by students and teachers. This process serves as the first step to assess the feasibility and practicality of the developed media. The data collected is described quantitatively to provide a more understandable picture of the aspects being assessed. The quantitative data obtained is summed up, divided by the total highest score obtained multiplied by 100. In the product validity and practicality test, the validator assessment percentage formula (PPV) is used by determining the interval length class based on the PPV value that has been determined. As for determining the results with the percentage of the assessment interval of the results of the practicality validation test in the following table 1:

Table 1. Validation and Practicality Test Results Assessment Interval

Interval Score (%)	Category
76 ≤ x ≤ 100	Very Practical
51 ≤ x ≤ 75	Practical
26 ≤ x ≤ 50	Not Practical
0 ≤ x ≤ 25	Very Impractical

The developed applications were analyzed using Cohen's d-test and t-test inferential statistical test. Before the hypothesis test, a prerequisite test was carried out, namely the Kolmogorov-Shapiro wilk normality test. The data is distributed normally if p>0.05 and homogeneous if p>0.05 (Wiyono, 2013). Hypothesis testing using a t-test at a significance level of 0.05 with the H0 test decision rejected. In addition, a test was also carried out to determine the increase in the effectiveness of application use with the Cohen's d test. The results of Cohen's d calculation are interpreted using Cohen's index d.

Table 2. Interpretation results *Cohen's d*.

***Cohen's d* value**	**Category**
>0.2	Small
>0.5	Currently
>0.8	Big

RESULTS AND DISCUSSION

This research developed products is application learning Rukhsah . Application This developed with objective For grow develop skills argue with the participants educate . Research development This own a number of The stages that refer to the ADDIE model are: as following :

Analysis

Analysis is an activity to find patterns, or ways of thinking related to systematic testing of something to determine parts, relationships between parts, and their relationship to the whole. At this stage beginning before do development product , researcher gather various information related to the learning process carried out by teachers at MTs Muhammadiyah 2 Jenangan Ponorogo specifically in Islamic Religious Education learning . Based on the results of observations conducted by researchers learning that is done use simple method . Most students still have difficulty in constructing clear and well-structured arguments . in to put forward their opinions . Many of them are not yet able to distinguish between personal opinions and arguments supported by valid evidence. Students also tend to use less credible sources to support their claims, so that the arguments presented seem weak and unconvincing. On the other hand, some students who try to convey arguments appear hesitant or not confident enough, making it difficult for them to convey their opinions clearly . With this need For develop learning media based on technology innovative like Application Learning with utilise *Smart Apps Creator* (SAC).

Design

Based on the results of the analysis carried out by the researcher, the research formulated several designs to develop the application. learning For support the learning process more interesting and interactive as well as capable develop students' argumentative abilities.[21] The features in the Rukhsah application are: 1) Home The Home page is the initial display that contains navigation to all application features, such as Learning Objectives, Materials, Videos, Quizzes, and About. In addition to being an access center, this page is also designed to introduce students to the basic concepts of the importance of critical thinking and argumentation in the context of Islamic law, especially regarding rukhsah. With a simple and intuitive interface, students can

[21] Fidiantara, Jufri, and Hadiprayitno, "Development of Android-Based Teaching Materials Integrated with Logic Games."

independently choose the features they want to access based on their needs or learning sequence. 2) Objectives, The Objectives feature presents learning outcomes explicitly, such as understanding the concept of rukhsah, analyzing conditions that allow rukhsah, and compiling arguments based on sharia arguments. These objectives not only provide direction for learning, but also direct students to think argumentatively: they know that what is expected is not just memorizing, but being able to explain and defend opinions logically. 3) Material, Material Features are developed not only to convey information or theories about rukhsah, but also to present case studies, reflective questions, and comparisons of opinions of scholars. For example, students are given certain scenarios such as someone who cannot fast due to illness, then asked to identify arguments that allow rukhsah and compile a logical explanation for their choice, training them to compile arguments based on context, facts, and evidence. 4) Video, Videos in the application contain visual explanations of real cases related to rukhsah, accompanied by narratives that stimulate critical thinking. For example, the video shows a debate between figures regarding rukhsah in prayer while traveling. Students are then asked to take a position, compile arguments, and compare them with other opinions. With this approach, video is not only an auxiliary media, but also a trigger for internal and external dialogue that forms the ability to argue actively.[22] 5) Quiz, The Quiz feature consists of two types of questions: multiple choice to test conceptual understanding, and open essay questions that encourage students to construct arguments based on specific cases. In essay questions, students are faced with problematic situations, such as someone facing obstacles in worship, then asked to construct an opinion that is logical, coherent, and based on evidence. This is an important part of measuring and training their argumentative skills. 6) About, This feature explains the background of the development of the Rukhsah application, the target users, and the benefits to be achieved. It emphasizes that the application is designed not only as a medium for learning religious material, but as a means of training critical and argumentative thinking in Islamic teachings.

Development

Application Rukhas is different applications with application generally. Applications This designed For develop skills to argue student through various

[22] Devi Ayu Septiani, Irmayani, and Yufika Dewi Muksin, "Implementation of the Results of the Development of Integrated Youtube Application-Based Learning Media 5M to Improve the Scientific Argumentation Skills of Grade X Students in Ecosystem Teaching Materials at SMAN 1 Mataram," *Journal of Community Service for the Master of Science Education* 4, no. 2 (2021): 1–5, https://doi.org/10.29303/jpmpi.v4i2.669.

feature interactive and educational. Some feature in application Rukhas namely: First, the home page. The home page is designed with simple form However interesting For viewed. On the page This load features available in the application namely the home menu, goals, materials, videos, quizzes, and about. Home page there is Images support For interesting interest student to application. The use of images can make learning more interesting and enjoyable, so that it can increase students' interest and motivation to learn.[23] The following This is home page displayed in application.

Figure 2. Initial Application Login View

Figure 3. Home View

Second, Learning Objectives. Learning objectives in an educational activity are designed to provide clear direction for students in achieving the expected competencies. [24]. Through this learning, it is expected that students can develop knowledge, attitudes, and skills that are in accordance with the material being taught. Following This is page displayed destination in application.

Figure 4. Learning Objectives

[23] Apriani Safitri and Kabiba, "Use of Picture Media to Increase Learning Interest of Grade IV Students at SD Negeri 3 Ranomeeto," *Didactics: Journal of Education and Science* Vol.20 No. (2020).

[24] Widyaningrum and Izzati, "Development of Student Worksheets (LKPD) Based on Critical Thinking on the Material of Lust and Ghadlab."

Third, Material. Learning materials in the application tailored to the needs of students to make it easier to understand and apply. The language used in the material is interactive language to create direct involvement with students in the learning process. Interactive learning has the potential to increase student motivation and involvement [25]. Next This is page the material displayed.

Figure 5. Material

Fourth, Video. Video in the application provide easy to understand explanations of the material learning Rukhsah. By using videos, it is hoped that students can more easily understand concepts that previously may have been difficult to understand only through text or verbal explanations.[26]

Figure 6. Learning Video

Fifth, Quiz. Through quizzes, students can directly apply the concepts they have learned in a more practical and realistic context[27]. This quiz not only

[25] Yuliana Sesi Bitu et al., "Interactive Learning: Improving Student Engagement and Understanding," *J-KIP (Journal of Teacher Training and Education)* 5, no. 2 (2024): 193–98.

[26] Septiani, Irmayani, and Muksin, "Implementation of the Results of the Development of Integrated Youtube Application-Based Learning Media 5M to Improve the Scientific Argumentation Skills of Grade X Students in Ecosystem Teaching Materials at SMAN 1 Mataram."

[27] Dwi Yuliastuti Puspitasari and Haryanto, ""The Effectiveness of Simulation Learning Assisted by Wordwall Games on the Learning Outcomes of Fifth Grade Students on Athletics Material in Public Elementary Schools" 183/II Sumber Mulya," *Doctoral Dissertation, University Jambi*, 2023.

tests students' understanding, but also encourages them to think critically, make decisions, and solve problems related to the learning material.

Figure 7. Quiz

Sixth, About. This page For explain to user about application Rukhsah. application Rukhsah aiming For give explanation deep to user about features, goals, and benefits from application This.[28] Rukhsah is application learning interactive designed For help student develop skills argumentation they through a fun and effective method.

Figure 8. About

In the application Rukhsah is also available features - features special For increase skills Argumentation student namely: come on comment, come on think, causality and come on analyze. With the feature This help student For realize understanding conceptual and ability argumentation scientific in a way oral or written with indicator argumentation in the form of claims, basis, justification, and support. [29] Next This is appearance in application.

[28] Fidiantara, Jufri, and Hadiprayitno, "Development of Android-Based Teaching Materials Integrated with Logic Games."

[29] Hardini and Alberida, "Analysis of Students' Argumentation Ability."

Picture 9. Let's Comment

Figure 10. Let's have an opinion

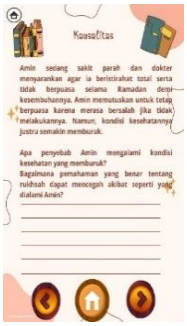

Figure 11. Causality

Figure 12. Let's Analyze

The "Let's Comment " feature is designed For increase skills argumentation student through interaction with the image presented. Each the image shown own relatedness with material learning.[30] Student requested For give comments that are analytical or critical. This feature aiming For practice student in compile clear opinion, based on arguments on real evidence, as well as disclose view with logical and structured way. [31] By commenting on the picture, students will used to assess, criticize, and build more arguments strong, no only enrich discussion but also sharpen ability think critical . In addition, the features This support development skills communication and improve quality interaction between student with give room for various different perspectives.[32]

[30] Ayu Nur et al., "Analysis of the Results of Using Learning Media in Increasing Students' Interest in Learning in Elementary Schools," *JIMR: Journal of International Multidisciplinary Research* 02, no. 01 June (2023): 44–52, indonesia.azramediaindonesia.com/index.php/JIMR/article/download/618/527.

[31] Dwi Siti Hartinah Eny Ambarawati, Muslim, and Hernani, "Analysis of Junior High School Students' Argumentation Ability on Environmental Pollution Material," INKUIRI:: Journal of Science Education 10, no. 1 (2021): 13–17, https://doi.org/10.20961/inkuiri.v10i1.29780.

[32] Fina Fakhriyah et al., "Developing Scientific Argumentation Skills of Prospective Elementary School Teachers as a Form of Strengthening 21st Century Skills," *Proceedings of the*

The "Let's Have an Opinion " feature is designed For push student in give opinion based on question story given. About the story This describe situation or problems that require analysis and opinion personal. Students requested For read story with careful, understanding the context and issues presented, then convey opinion or solution based on understanding.[33] This feature aiming For practice ability think critical, and ability to argue according to with component argumentation namely claims, data, warrants, and backing with using data or information contained in question story.[34] By giving room for every student For respond question story, features this also develops skills writing, communicating, and viewing a issue from various perspective .

The " Causality " feature is designed For help student understand and identify connection cause and effect in various situation or problem. In the feature this , students given a events and requested For analyze what is becoming cause (reason) and what the consequences (effects).[35] This feature aiming For practice skills analytical and thinking critical , and help student develop better understanding deep about How incident happened and what possible consequences appear.[36] By identifying connection causal , students No only capable see cause and effect in a way more clear , but also can develop more argumentation logical and structured .

The "Let's Analyze " feature is designed For push student For dig more deep and analyze various information. In the features this, there is a case or phenomena that require review deep. The goal is For practice ability analytical in understand elements important from A problems and search patterns, causes, and the impact.[37] Student requested For break information provided, identifying factors main, and give evaluation or interpretations based on existing evidence . This feature help hone skills think critical and objective, because student No only

National Postgraduate Seminar Pascasarjana Universitas Negeri Semarang 4, no. 1 (2021): 190–95, https://proceeding.unnes.ac.id/index.php/snpasca/article/view/847.

[33] Hutasoit and Gultom, "Development of Interactive Media-Based Teaching Materials Using Macromedia Flash Applications to Improve Mathematical Communication Skills at Gema Buwana Middle School."

[34] Ambarawati, Muslim, and Hernani, "Analysis of Junior High School Students' Argumentation Ability on Environmental Pollution Material."

[35] Fera Zulainy, Rusdi Rusdi, and Jefri Marzal, "Development of Student Worksheets Based on Realistic Mathematics Education to Improve Students' Argumentation Skills," *Cendekia Journal: Journal of Mathematics Education* 5, no. 1 (2021): 812–28, https://doi.org/10.31004/cendekia.v5i1.440.

[36] Zaroh, Muntholib, and Joharmawan, "Implementation of Scientific Argumentation Assessment Instruments for Reaction Rate Materiali."

[37] Zulainy, Rusdi, and Marzal, "Development of Student Worksheets Based on Realistic Mathematics Education to Improve Students' Argumentation Skills."

accept information so only, but also test it, analyze it, and provide conclusion.[38] Through feature this, can develop skills in formulate more analysis deep and logical, as well as increase ability For think in a way structured and systematic in face various situation.[39]

Implementation

Implementation product development application done For know validity, practicality and effectiveness use application in learning. As for validity, practicality and effectiveness application Rukhsah is as following.

Validity Application Rukhsah

Products that have been developed furthermore done validation For determine validity from Application Rukhsah. Validation Application Rukhsah carried out by four expert validators namely Wirawan Fadly as expert lecturer in field research and development. And two teachers Siti Nurjanah as a teacher at MTs Muhammadiyah 2 Jenangan Ponorogo as an expert validator material and Maratus Solichah as a media expert validator. Validation Results Product can seen in the table following.

Table. 3 Expert Validator Validation Results

Validators	Design		Language		Material		Utility	
V 1	4	5	5	4	4	4	5	5
V 2	5	5	5	4	4	5	4	5
V 3	5	5	4	4	5	5	4	5
Total	14	15	14	12	13	14	13	15
Percentage	93%	100%	93%	80%	87%	93%	87%	100%
Average Percentage								92%

Based on the results validation from expert validator to obtain the average value is 92% in the Very Good category. Thus application Rukhsah own attractive design For increase motivation Study students. The use of appropriate learning media is very effective. For increase interest and motivation student in learn.[40] [41]

[38] Dwi Wulandari, Maison, and Dwi Agus Kurniawan, "Identification of Students' Conceptual Understanding and Argumentation Skills in Physics Learning," *Journal of Mathematics Education* 13, no. 1 (2023): 93–99, https://doi.org/10.37630/jpm.v13i1.817.

[39] Fidiantara, Jufri, and Hadiprayitno, "Development of Android-Based Teaching Materials Integrated with Logic Games."

[40] Nur et al., "Analysis of the Results of Using Learning Media in Increasing Students' Interest in Learning in Elementary Schools."

[41] Ina Magdalena et al., "The Importance of Learning Media to Increase Students' Interest in Learning at Meruya Selatan 06 Pagi Elementary School," *EDITION: Journal of Education and Science* 3, no. 2 (2021): 312–25, https://ejournal.stitpn.ac.id/index.php/edisi.

Students who are interested and have interest in learning usually more motivated and enthusiastic For follow the learning process. When the material delivered with an interesting and appropriate way with life they, students feel more pushed For understand more in. Motivation the driven by curiosity know in depth related the material studied.[42]

Practicality Application Rukhsah in Learning

Practicality is a concept that refers to something easy done, efficient, and can applied in life daily without Lots Difficulty. Practicality often measured based on how much easy a matter done and given benefit or desired result. Practicality Application Rukhsah in Learning seen from response student with evaluation from a number of aspects measured namely learning objectives, language, materials, interest and Success Use Application Rukhsah.

Table 4. Response Results student

Assessment Aspects	Score Results	Maximum Score	Percentage	Category
Learning objectives	80	100	80 %	Very Practical
Language	80	100	80 %	Very Practical
Material	132	1 50	88 %	Very Practical
Interest in Using Applications Rukhsah	140	150	93 %	Very Practical
Application Usage Success Rukhsah	174	200	87 %	Very Practical
Average	121		86%	Very Practical

Based on the results of student responses to the application learning Rukhsah get good results. First, the aspect Purpose and Language of obtaining mark The same as much as 80% percentage in the very practical category. Second, the aspect material to obtain mark as 88% in the very practical category. Third, the aspect interest use application Rukhsah to obtain mark as much as 93% in the very practical category. Fourth, the aspect success use application Rukhsah to

[42] Syti Mayang Sari, Muhammad Riduan Harahap, and Ahmad Ridwan, "Utilization of Poster Learning Media in an Effort to Increase Student Learning Interest in Fiqh Subjects," *Insiru PAI* 7, no. 2 (2023): 438–49.

obtain mark as much as 87% in the very practical category. Thus practicality application Rukhsah to obtain average value by 86% in the category very practical.

Practicality of the application in terms of language and purpose reflected in the positive response of students to the application display design, the choice of clear and easy-to-read font types and sizes, and the use of simple language without confusing words. Students also feel easy in understand objective learning delivered in application mentioned. The language used nature interactive, so that student can with fast understand Contents book in a way directly.[43] A communicative writing style also makes it easier delivery message, create more effective and easy accepted by students.[44]

Effectiveness Application Rukhsah in Learning

In the application of Rukhsah, an effectiveness test was carried out to determine the level of effectiveness in learning. Before the effectiveness test, a prerequisite test and a hypothesis test were carried out. The prerequisite test carried out was a normality test. Data normality test through pretest and posttest results. Normality test use testing Kolmogorov-Smirnov Shapiro-Wilk with SPSS Version 20. Results of normality test can seen in the table.

Table 5. Normality Test Results

Tests of Normality

	Kolmogorov-Smirnov [a]			Shapiro Wilk		
	Statistics	df	Sig.	Statistics	Df	Sig.
Pretest	.121	36	.200 *	.946	36	.080
Posttest	.126	36	.157	.934	36	.093

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

a. Lilliefors Significance Correction

Based on testing Kolmogorov-Smirnov Shapiro-Wilk pretest score data obtained results significance of 0.080. Meanwhile, the post-test value data obtained results significance of 0.093. It can be concluded that normality test results show significance >0.05 which means H0 is accepted with statement that the data is normally distributed.

[43] Septi Budi Sartika, Nur Efendi, and Fitria Eka Wulandari, "The Effectiveness of Ethno-STEM Based Science Learning in Training Analytical Thinking Skills," Journal of Educational and Learning Dimensions 10, no. 1 (2022): 1–9, https://doi.org/10.24269/dpp.v10i1.4758.

[44] Pawana, Suharsono, and Kirna, "Development of Interactive Multimedia Based on Projects with ADDIE Model on Web Programming Material for Grade X Students of Even Semester at SMK Negeri 3 Singaraja."

After obtaining normal data, the next step is to conduct a T Test using the Paired Sample T Test. The results of the T Test can be seen in the table following.

Table 6. T-Test Results

Paired Samples Test

		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference Lower	Upper			
Pair 1	Pretest - Posttest	-18,417	11.103	1,851	-22.173	-14,660	-9.952	35	.000

Based on the results of the Paired Sample T Test negative average obtained, this This because the pretest is reduced by the posttest. With negative results show that the average posttest is more big rather than pretest. The resulting significance of 0,000. This is show test results <0.05 which means H0 is rejected. So the conclusion is from table on is existence significant difference in mean values between before and after Application Learning Rukhsah. Thus application learning Rukhsah can it is said effective, Because has There is significant difference.

After conduct prerequisite and hypothesis tests, then *Cohen's d* test was performed For know level effectiveness use application learning Rukhsah.

Table 7. Cohen's d Test Results

Results

Cohen's d = 5.541 (large effect size)

Cohen's d is calculated according to the formula: $d = (M_1 - M_2) / SD_{pooled}$

$SD_{pooled} = \sqrt{[(SD_1^2 + SD_2^2) / 2]}$

Where: M_1 = mean of group 1, M_2 = mean of group 2, SD_1 = standard deviation of group 1, SD_2 = standard deviation of group 2,

SD_{pooled} = pooled standard deviation.

$M_1 = 60.69$, $M_2 = 7.11$, $SD_1 = 8.085$, $SD_2 = 11.029$

$d = (60.69 - 7.11) / 9.67$, $SD_{pooled} = \sqrt{[(8.085^2 + 11.029^2) / 2]} = 9.67$

$d = 53.580 / 9.67 = 5.541$

$d = 5.541$

Cohen's d test results table to obtain mark of 5,541 which is >0.8 in the category great effect. With this so application learning Rukhsah which has been developed is able to help students realize conceptual understanding and scientific argumentation skills orally or in writing with indicators in the form of claims, basis, justification, and support.[45] The results of data analysis show an increase in students' argumentation skills between before and after using the application. Rukhsah in learning.

Application learning Rukhsah able to help improve students ' argumentation skills through activities in application which trains students in delivering arguments. Through activities designed on this platform, students are given the opportunity to practice expressing opinions and reasons as well credible evidence For state opinions. By sharing opinions, providing supporting reasons, and responding to classmates' views, students not only deepen their understanding of the Rukhsah material, but also hone their critical thinking and public speaking skills to be more confident in conveying their views.

Evaluation

At this evaluation stage, it is used to see the learning system by implementing the Application. Rukhsah can run according to expectations or not. If at this stage there are still some shortcomings then a revision will be made.[46] Educators can assess the extent to which the use of the application is able to help students understand the concept of argumentation, formulate opinions based on evidence, and improve their ability to communicate effectively. [47] Evaluation also provides an overview of the extent to which students can apply students' argumentation skills. The results of this evaluation will be the basis for improving and perfecting the application, so that it can be more optimal in supporting the development of students' argumentation skills.

DISCUSSION

Argumentation skills are an effort to convince or prove the truth of a statement, opinion, attitude or belief, by being proven by facts, so as to be able to convince and prove that the opinion can be said to be true or not. Based on the Toulmin Argumentation Pattern (TAP) argumentation model, the quality of an

[45] Fadly and Miaturrohmah, "Arguing Skillfully with Argument-Driven Inquiry Science Textbooks."

[46] Amir Hamzah, *Metode Penelitian & Pengembangan Research & Development* (Malang: CV.Literasi Nusantara Abadi, 2019).

[47] Wirawan Fadly and Miaturrohmah Miaturrohmah, "Arguing Skillfully with Argument-Driven Inquiry Science Textbooks," *Indonesian Journal of Science Education* 9, no. 1 (2021): 119–38, https://doi.org/10.24815/jpsi.v9i1.18630.

argument consists of six components including claims, data, warrants, backing, rebuttals, and qualifiers. [48]

The development of the Rukhsah learning application based on Smart Apps Creator (SAC) aims to help students develop argumentation skills independently and in a structured manner. Argumentation skills are important abilities that can be seen from several key aspects that show how students construct and deliver arguments effectively. [49]

First, students are expected to be able to formulate clear and relevant claims according to the topic being discussed, for example about the application of the rukhsah concept in everyday life. Second, students need to present strong and precise evidence to support these claims. This evidence can be in the form of data, facts, arguments, or quotes from reliable sources.

Furthermore, it is important for students to explain the relationship between the claims and the evidence they present. This means that students must be able to logically show how the evidence supports their claims. In addition, students who have good argumentation skills must also be able to listen and respond to the views of others constructively, including delivering relevant and polite counterarguments. Students must also have the ability to summarize arguments concisely and convey messages persuasively, which are important indicators of mature argumentation skills.[50]

The development of the Rukhsah learning application based on SAC providing learning materials on argumentative skills including activities that stimulate critical and analytical thinking. For example, providing real cases or opinion articles that contain arguments that can be analyzed, both in depth and from various perspectives. Students can be trained to examine the arguments, evaluate their strengths and weaknesses, and assess the evidence used to support the claims. This application has characteristics that can significantly improve students' argumentation skills at a high level of practicality. The results of analysis show an increase in students' argumentation skills between before and after using the Rukhsah learning application based on SAC.

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[48] Yunita Rahayu, Suhendar Suhendar, and Jujun Ratnasari, "Students' Argumentation Skills on Motion System Material of Senior High Schools in Sukabumi Regency-Indonesia," *Biodik* 6, no. 3 (2020): 312–18, https://doi.org/10.22437/bio.v6i3.9802.

[49] Fadly and Miaturrohmah, "Arguing Skillfully with Argument-Driven Inquiry Science Textbooks."

[50] Nur Aura Ladistya Novanda, Supeno Supeno, and Aris Singgih Budiarso, "Development of Ethnoscience-Based Student Worksheets to Improve Junior High School Students' Scientific Argumentation Skills in Science Learning," *Journal Education Mathematic* 14, no. 1 (2024): 8–18, https://doi.org/10.37630/jpm.v14i1.1435.

The activities in the Rukhsah learning application have encouraged students to be more involved in arguing actively. This process not only trains effective communication skills, but also develops critical and reflective thinking skills. Students learn to construct logical arguments, defend their opinions with evidence, and accept and respond to other people's views in a positive and open manner. This activity makes them more active participants in learning and increasingly able to develop their argumentation skills.[51] In addition to inviting students to think critically and logically, argumentation in learning also makes students more active because they can collaborate with friends.[52]

CONSCLUSION

The Rukhsah application based on Smart Apps Creator (SAC) is a valid, practical, and effective learning innovation in improving students' argumentation skills in Islamic Religious Education subjects. This application is designed with interactive features such as learning objectives, reflective materials, videos, quizzes, and case simulations that directly train students in constructing arguments logically and contextually. Through two stages of trials, namely limited trials and field trials, the application showed consistency in improving results, with a high effectiveness value (Cohen's d = 5.541) indicating a major impact on students' argumentative abilities. The results of this study indicate that the Rukhsah application is not only a fun and easily accessible learning medium, but also functions as a strategic tool in developing students' critical thinking skills. This study provides a new contribution to the development of digital media based on religious values that are relevant to the demands of learning today.

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