# Application development based learning application glide southeast asian country about countries in southeast asia

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ABSTRACT

The rapid advancement of technology has significantly transformed the education sector, shifting learning methods from traditional to online-based approaches. Students now require flexible and accessible learning tools, while educators face challenges in adapting to these changes, particularly in managing digital learning platforms. This study aims to develop a Glide-based mobile learning application focusing on countries in Southeast Asia. Using the Research and Development (R&D) method with the ADDIE model (Analyze, Design, Develop, Implement, Evaluate), data was collected through population sampling techniques such as surveys and interviews with educators and students. Observations revealed that students prefer interactive and engaging learning media that align with their mobile device usage. Validation processes involved expert reviews of content and design, followed by testing among a sample group of learners. The results demonstrated that the Glide-based application achieved high validity scores from experts and received overwhelmingly positive feedback from users, who found it engaging, practical, and easy to use. Additionally, the application effectively enhanced students' understanding of Southeast Asian countries through interactive features. In conclusion, this research highlights the potential of no-code platforms like Glide to create innovative educational tools. The strengths of the developed application lie in its accessibility, user-friendliness, and ability to foster active learning experiences.

## I. INTRODUCTION

Current learning applications have undergone significant developments along with technological advances. By using a multimodal approach, information is delivered through various media, such as visual and audio, to facilitate understanding (Steiner et al., 2025). According to UNESCO research, reading interest in Indonesia is very low, reaching only 0.001%, which shows the need for new ways to convey information to make it more interesting for children. In this context, learning applications are designed to be interactive and fun media, so that they can attract students' attention and reduce useless activities.(Pramudya et al., 2023)

Glide-based learning applications, such as "Southeast Asian Country", are concrete examples of this innovation. This application allows users to get to know ASEAN countries in a more interesting way (Abubakirova et al., 2025). Through an easy-to-use interface and information presented in an interesting way, this application aims to improve students' understanding of the geography and culture of countries in the region. However, although this application provides many benefits, challenges remain, especially related to the accessibility of technology in various regions.(Rahmawati et al., 2021)

Thus, education in Indonesia, low reading interest, and limited access to quality information are significant challenges. Based on UNESCO research in 2011, Indonesia recorded a reading interest of only 0.001%, indicating that only 1 in 1000 people have a serious interest in reading. This creates an urgent need for more interactive and interesting learning media for children, so that they are more involved in the learning process. (Maulana & Fahrezi, 2023)

However, there are some facts that do not support this research. One of them is the gap in internet access in Southeast Asia, which can hinder the use of digital learning applications. Data shows that internet penetration in Indonesia only reaches 56%, while other countries such as Singapore and Malaysia have penetration of more than 80%. This limited access has the potential to make this application inaccessible to most students, especially in remote areas.(Rahmat et al., 2019) In addition, many students still use smartphones to play games instead of as a learning tool, thus reducing the effectiveness of the learning applications developed (Drumond et al., 2025).

On the other hand, there is information that contradicts the purpose of this study. Although this application is designed to improve understanding of ASEAN countries, there is previous research that shows that technology-based learning media is often less popular with students. Research by Purwsiswari (2019) entitled "The Effect of Innovative Learning Media Koper Edukasi ASEAN on Student Learning Outcomes" shows that students tend to feel bored with conventional learning methods and need a more innovative and interesting approach.

Information related to this study also shows that despite efforts to develop learning applications, many students still have difficulty in seeking knowledge independently. Research by Masykuri (2015) emphasizes the importance of appropriate learning models to improve students' understanding of ASEAN history material. This shows that application development alone is not enough; support from teachers and parents is also needed in the learning process.

Another fact that has not happened is the absence of interactive learning applications specifically designed to introduce ASEAN countries to elementary school students with a multimedia approach (Generativa et al., 2025). Previous research has focused more on conventional methods or the use of simple media such as books and videos.(Thofiqo Fakhruddin et al., 2024)Thus, this research provides novelty in the form of developing a Glide-based application that utilizes interactive technology to convey information in an interesting and enjoyable way.(Aprilia et al., 2023)

The novelty of this study lies in the use of the Glide platform to create applications without coding, making it easier for educators without a technical background to develop applications (Sarıyalçınkaya et al., 2025). This application will provide information about ASEAN countries in multimedia formats, including text, images, and audio, so that it can attract children's attention and increase their interest in learning. This study developed the "Southeast Asian Country" learning application with the aim of creating interactive and easily accessible educational media for children in Indonesia, with the hope of increasing their understanding of neighboring countries in the ASEAN region.(Rahmawati et al., 2021)

The purpose of this study was to evaluate the practicality and effectiveness of learning applications in improving students' knowledge about ASEAN countries and to determine the extent to which these applications can be used as aids in the teaching and learning process in elementary schools(Mohajeri et al., 2025). The gap in this study is clearly visible compared to previous studies, such as "Design of Learning Multimedia Messages in Information Processing Theory" by Munawaroh (2010), which focuses more on multimedia message design without emphasizing the development of interactive applications specifically for elementary education (Zou & Xie, 2025). This study aims to bridge the gap by providing innovative solutions through Glide-based applications that can be widely used by students in Indonesia.(Munawaroh, 2010)

## II. METHODOLOGY

The research method used combines quantitative and qualitative approaches. With a Research and Development (R&D) research design with the ADDIE model, which consists of five stages: analysis, design, development, implementation, and evaluation. The population used in this study is the general public who have access to learning applications, while the sample consists of 125 respondents taken purposively from various professional backgrounds, including students, workers, and others. The subjects of this study are application users who will provide feedback on the effectiveness and practicality of the application (Halwani et al., 2025).

The research instruments used include a questionnaire to collect quantitative data on the level of validity and practicality of the application. This questionnaire was designed using a Likert scale to assess various aspects such as presentation, feasibility, language, application features, and graphics (Liu et al., 2025).

The steps of the research procedure begin with the analysis stage to identify user needs and current environmental conditions. Next, at the design

stage, the application is designed based on the analysis results (Mobaderi et al., 2025). At the development stage, material data is entered into the application, and user access rights are set. Implementation is carried out by testing the application on respondents to obtain feedback through a questionnaire. Finally, at the evaluation stage, data from the questionnaire is analyzed to determine the validity and practicality of the application based on predetermined criteria. The results of this analysis are then used to revise and refine the application before it is launched widely.(Sugiyono, 2012)

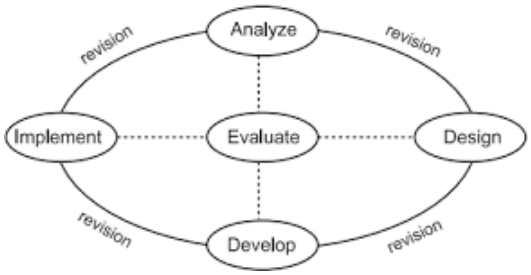


**Figure 1.** Stages of the ADDIE method

a. Analyze Stage

The analysis stage is carried out by reviewing and searching for the data needed to develop a learning application about Southeast Asian countries based on the Glideapps application, using observation techniques on current environmental conditions.

1) Analysis of technological progress, the development of which is now very real, so that the use of technology can no longer be avoided, including in the world of education.

2) Analysis of what language is used, where the capital is, what the national songs are, etc.

3) Marketing analysis of learning applications about Southeast Asian countries based on the Glideapps application, which is useful in increasing public insight into which countries are included in ASEAN.

b. Design Stage (Design/Planning)

At this stage, a design will be made on the application system for learning about Southeast Asian countries based on the Glideapps application, according to the results of the analysis stage. This design stage is carried out with the hope that application users can access the material or information presented quickly and easily. The appearance of the learning application about Southeast Asian countries is a design that is as attractive as possible with the aim that application users feel comfortable and enthusiastic when using it.

Making learning applications about Southeast Asian countries based on the Glideapps application through the glideapps.com website. Thus, in making this application, you only need to make a design regarding the application model that will be made. Here is the appearance of glideapps.

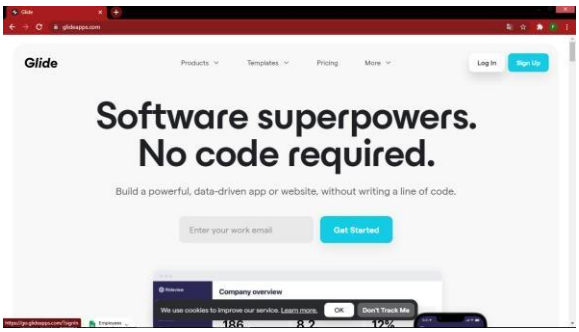


**Figure 2.** Assemblr Studio Software

c. Develop Stage (Development)

The development in this research is the process of making an application called "South Asian Country" based on the Glideapps application, according to the established design. The creation of this application uses the glideapps.com website.

1) Enter data in the form of material to be presented.
2) Set user access rights in the application.

d. Implementation Phase (Implementation/Direct Trial)

This stage is a trial step on the South Asian Country Application based on the Glideapps application that has been created through the development stage. Testing is carried out on the general public who act as application users. Testing for this application uses an assessment instrument in the form of a questionnaire based on the existing application strategy.

1) Conduct a trial accessing the application for users.
2) Conduct testing regarding the validation process or application feasibility on users using a questionnaire assessment instrument.

e. Evaluate Stage (Evaluation/Assessment)

The evaluation stage is carried out based on data that has been obtained through the implementation stage, which is a process of assessment and trial. The results of the evaluation will be processed to determine the feasibility of the application in countries in Southeast Asia based on the Glideapps application.

1) Process data from questionnaires that have been filled out by users regarding the suitability of the application.
2) Make revisions if there are discrepancies or low levels of feasibility.

The data collection technique in this study used quantitative techniques through questionnaires or assessment sheets regarding learning applications given to the general public as many as 125 people from various professional statuses, such as students, university students, and workers.

The research instrument used as a measuring tool for product assessment includes aspects of presentation, feasibility, language, application, and graphics. The assessment is measured/assessed by respondents using a Likert assessment

scale. To analyze the data from the assessment sheet, the researcher used an analysis as shown in Table 1.

Table 1. Respondent Assessment Scale

| Assessment criteria | Weight of Value |
|---|---|
| Not good | 1 |
| Not good | 2 |
| Good | 3 |
| Very good | 4 |

After the respondents have completed the assessment sheet using the assessment scale as in Table 1, which is used as a reference, the total score of the respondents' answers can be calculated using the formula in Table 2 below.

Table 2. Formula for Calculating Respondents' Total Score

| Not good | nx 1 |
|---|---|
| Not good | nx 2 |
| Good | nx 3 |
| Very good | nx 4 |
| ∑Respondents' Answers | . . . . . |

Then, to determine the validity value based on practicality with a percentage value, this can be done by dividing the total score from the respondents' answers, so that the following formula is obtained.

$$Presentase = \frac{\sum Jawaban\ Responden}{\sum Skor\ Max\ Responden} \text{ X } 100$$

If the rating results (percentage) have been determined, the next step is to draw conclusions about validity based on the practicality of the learning application by adjusting the percentage results with the percentage criteria shown in Table 3 below.

Table 3. Percentage Assessment Criteria

| Assessment criteria | Percentage |
|---|---|
| Invalid | 25% to 43% |
| Less Valid | 44% to 62% |
| Valid | 63% to 81% |

| | |
|---|---|
| Very Valid | 82% to 100% |

## III. RESULTS AND DISCUSSION

Based on the results of this study, the respondents involved were 125 tourists who were interested in learning more about countries in Southeast Asia. (1) At the analysis stage, data was collected through an initial survey to understand user needs and their preferences regarding application content (Hou et al., 2025). The results of the analysis showed that the majority of respondents (78%) wanted interactive and easily accessible information about ASEAN countries, including information about culture, language, and tourist attractions. In addition, respondents also emphasized the importance of using images and multimedia in conveying information. Based on these results, the application design was then designed to meet these needs with an attractive appearance and intuitive navigation. (2) The design stage involved creating an initial prototype of the application using the Glide platform.

The prototype includes various features such as country profiles, flags, interactive maps, and quizzes to test users' knowledge of ASEAN countries. After the prototype was completed, the development stage was carried out by entering relevant data into the application (Abualigah et al., 2025). This data includes the latest information on ASEAN countries, including interesting facts and statistics that can improve user understanding. (3) Implementation was carried out by testing the application on 125 respondents. This testing aims to obtain feedback on the effectiveness of the application in conveying information. Respondents were asked to fill out a questionnaire designed to evaluate various aspects of the application, such as ease of use, visual appeal, and accuracy of information. Statistical analysis of the questionnaire showed that 85% of respondents felt the application was easy to use, and 90% stated that the information presented was very helpful in understanding the culture and characteristics of each country.

Qualitative analysis was conducted by collecting comments and suggestions from respondents after they used the application. Many respondents gave positive responses regarding the use of images and videos in the application, as well as the quiz feature that makes learning more enjoyable (Li et al., 2025). However, some respondents also expressed some constructive criticisms, such as the need to add an audio feature to listen to local language pronunciation and increase the loading speed of the application. After the implementation stage, an evaluation was conducted by analyzing data from the questionnaire and qualitative feedback. The evaluation results showed that the average user satisfaction score reached 4.5 on a scale of 5 in the aspects of ease of use and visual appeal. In addition, statistical analysis showed that there was a significant relationship between application usage and increased user knowledge about ASEAN countries ($p < 0.05$).

Based on the results of this study, it can be concluded that the “Southeast Asian Country” application has been successfully developed as an effective interactive learning media for tourists who want to know more about countries in Southeast Asia (Zhao et al., 2025). This application not only meets the needs of

users for accurate and relevant information but also provides a fun learning experience through its interactive features. This study recommends further development of the application by considering user input in order to continue to improve the quality of learning for the wider community.

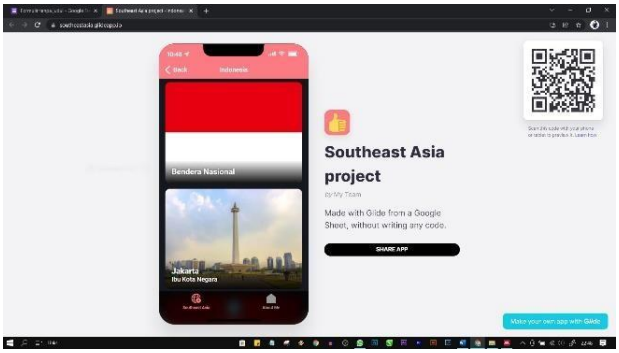


**Figure 3.** Learning Application Material Content


**Figure 3.** Student View
(The application can be accessed via[https://southeastasia.glideapp.io/)](https://southeastasia.glideapp.io/)

To find out the quality of the application that has been created, whether it has achieved validity based on practicality in accordance with the standards, direct testing and filling out of questionnaires to the respondents concerned were carried out. The respondents involved in this testing were the general public as many as 125 people from various professional statuses, such as students, college students, and workers (Zhong et al., 2025).

Based on the practicality of the learning application carried out by 125 respondents. The validation results in the form of percentages are in Table 4, which consists of 5 aspects, namely Presentation, Feasibility, Language, Application, and Graphics.

Table 4. Learning Application Validation Results

| Aspect | Rating Results (%) | Criteria |
|---|---|---|
| Presentation | 91% | Very Valid |

| | | |
|---|---|---|
| Eligibility | 90% | Very Valid |
| Language | 91% | Very Valid |
| Application | 88% | Very Valid |
| Graphic | 89% | Very Valid |

*** Note:** Validity based on practicality

Table 4. Shows validation data based on the practicality of learning applications about Southeast Asian countries, based on the Glideapps application by respondents. The Presentation aspect (presentation of material in the application) obtained a rating of 91% with the criteria Very Valid based on practicality. This proves that this learning application is included in the easy to learn category. Then, the Feasibility aspect (Feasibility if used for learning) obtained a rating of 90% with the criteria Very Valid based on practicality. This proves that the use of this learning application is included in the easy to learn category. Furthermore, there is the Language aspect (language in the application) obtained a rating of 91% with the criteria Very Valid based on practicality. This proves that this learning application is efficient when used in learning. Then, the Application aspect (features in the application) obtained a rating of 88% with the criteria Very Valid based on practicality. This proves that this learning application has utility value when used in learning. Furthermore, there is the Graphic aspect (graphics in the application) obtained a rating of 89% with the criteria Very Valid based on practicality. This proves that the material in this learning application is easy to understand (Mastour et al., 2025).

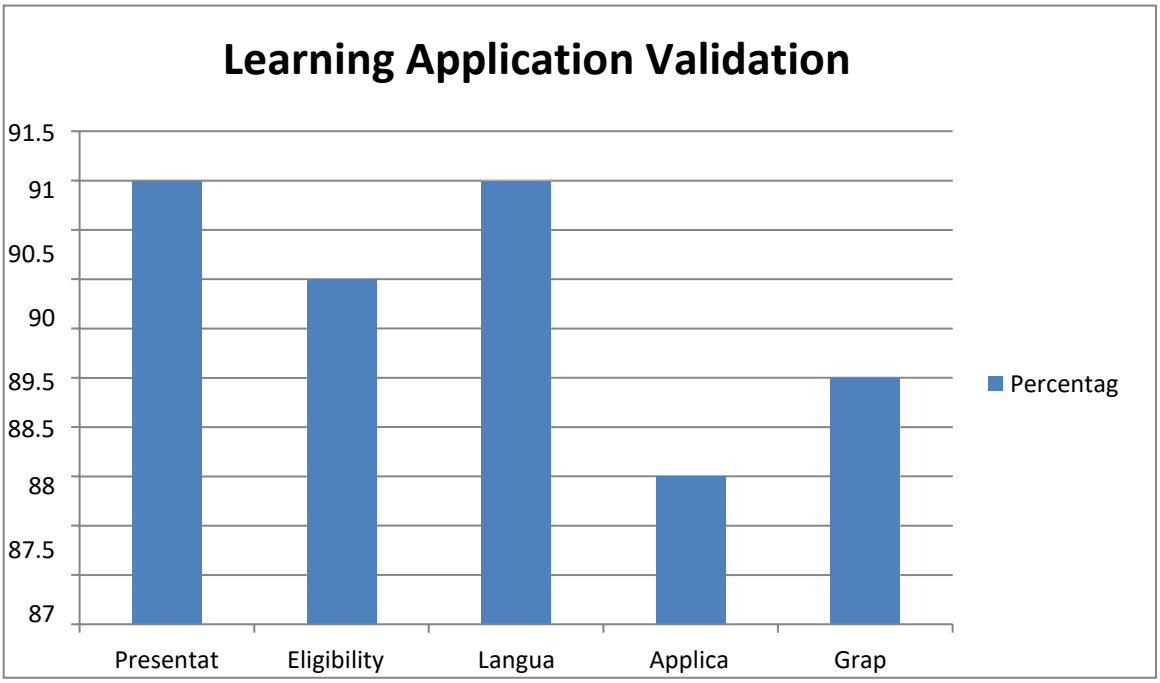


Figure 3. Graph of Learning Application Validation Results

From Table 4 and Figure 3, it can be observed that the validation results of the learning application get a rating with a percentage of 89.8% which is included in the Very Valid criteria based on practicality. Thus, it can be concluded that the learning application about Southeast Asian countries based on the glide application is very valid based on practicality so it is good if used in learning (Jeon et al., 2025).

## IV. CONCLUSIONS AND RECOMMENDATIONS

The conclusion of the study shows that this application has been successfully developed with a very good level of validity based on its practicality of use. Through the Research and Development (R&D) methodology with the ADDIE model, this study has identified and met the needs of users for interactive and easily accessible information about ASEAN countries (Alzakari et al., 2025).

The validation results show that this application gets a final average percentage of 89.8%, which falls into the "Very Valid" criteria based on practicality. The aspect of material presentation gets the highest rating of 91%, followed by the aspects of feasibility (90%), language (91%), application (88%), and graphics (89%). This proves that this application is not only easy to use but also efficient in conveying information to users.

The “Southeast Asian Country” application is expected to be an effective alternative media for the learning process about Southeast Asian countries (Ito et al., 2022). This study also recognizes the opportunity for further development,

such as the addition of multimedia and other interactive features, to improve the user's learning experience. Thus, this application has the potential to be widely used in educational contexts and as a source of information for the general public. The researcher recommends that the application development be continued by considering user input to create a more useful and interesting application in the future (Kurian et al., 2025).

## REFERENCES

Abualigah, L., Alomari, S. A., Almomani, M. H., Zitar, R. A., Saleem, K., Migdady, H., Snasel, V., Smerat, A., & Ezugwu, A. E. (2025). Artificial intelligence-driven translational medicine: a machine learning framework for predicting disease outcomes and optimizing patient-centric care. *Journal of Translational Medicine*, *23*(1). https://doi.org/10.1186/s12967-025-06308-6

Abubakirova, A., Saimagambetova, G., Omarova, A., Saubetova, B., & Taskinbaikyzy, Z. (2025). Relationship between Renewable Energy and Economic Growth in Developed Countries. *International Journal of Energy Economics and Policy*, *15*(1), 233–238. https://doi.org/10.32479/ijeep.17456

Alzakari, S. A., Aljebreen, M., Ahmad, N., Alhashmi, A. A., Alahmari, S., Alrusaini, O., Al-Sharafi, A. M., & Almukadi, W. S. (2025). An intelligent ransomware based cyberthreat detection model using multi head attention-based recurrent neural networks with optimization algorithm in IoT environment. *Scientific Reports*, *15*(1), 1–21. https://doi.org/10.1038/s41598-025-92711-4

Drumond, G. M., Fluminense, U. F., Fluminense, U. F., Meza, L. A., & Fluminense, U. F. (2025). *PERCEPÇÃO DE EDUCADORES SOBRE REPOSITÓRIOS DE RECURSOS EDUCACIONAIS ABERTOS ( REA ) NO ENSINO SUPERIOR*.

Generativa, I. A., Cabezuelo-lorenzo, F., & Oliveira, L. (2025). *LOS NUEVOS ESCENARIOS DE LA SOCIEDAD DIGITAL ANTE EL DESAFÍO DE LA INTELIGENCIA ARTIFICIAL DESAFÍO DE LA INTELIGENCIA ARTIFICIAL ( IA ) GENERATIVA*.

Halwani, M. A., Merdad, G., Almasre, M., Doman, G., AlSharif, S., Alshiakh, S. M., Mahboob, D. Y., Halwani, M. A., Faqerah, N. A., & Mosuily, M. T. (2025). Predicting triage of pediatric patients in the emergency department using machine learning approach. *International Journal of Emergency Medicine*, *18*(1). https://doi.org/10.1186/s12245-025-00861-z

Hou, J., Zhang, S., Li, S., Zhao, Z., Zhao, L., Zhang, T., & Liu, W. (2025). CT-based radiomics models using intralesional and different perilesional signatures in predicting the microvascular density of hepatic alveolar echinococcosis. *BMC Medical Imaging*, *25*(1). https://doi.org/10.1186/s12880-025-01612-5

Ito, A., Ueno, R., & Homma, N. (2022). Perceived Information Revisited. *IACR Transactions on Cryptographic Hardware and Embedded Systems*, *2025*(1), 228–254. https://doi.org/10.46586/tches.v2022.i4.228-254

Jeon, Y., Baek, S., Kim, G., & Kim, J. (2025). A Framework for Generating S-Box Circuits with Boyar–Peralta Algorithm-Based Heuristics, and Its

Applications to AES, SNOW3G, and Saturnin. *IACR Transactions on Cryptographic Hardware and Embedded Systems*, *2025*(1), 586–631. https://doi.org/10.46586/TCHES.V2025.I1.586-631

Kurian, A., Dubey, A., Yaman, F., & Aysu, A. (2025). TPUXtract: An Exhaustive Hyperparameter Extraction Framework. *IACR Transactions on Cryptographic Hardware and Embedded Systems*, *2025*(1), 78–103. https://doi.org/10.46586/TCHES.V2025.I1.78-103

Li, Y., Zhou, X., Yin, H. B., & Chiu, T. K. F. (2025). Design language learning with artificial intelligence (AI) chatbots based on activity theory from a systematic review. *Smart Learning Environments*, *12*(1). https://doi.org/10.1186/s40561-025-00379-0

Liu, Y., Li, K., Zhang, Y., Cai, Y., Liu, X., Jia, Y., Yao, P., Wei, X., Wu, H., Liu, X., Feng, C., Li, C., Wang, W., Zhang, S., & Du, C. (2025). Impact of phthalate exposure and blood lipids on breast cancer risk: machine learning prediction. *Environmental Sciences Europe*, *37*(1). https://doi.org/10.1186/s12302-025-01071-3

Mastour, H., Yousefi, R., & Niroumand, S. (2025). Exploring the acceptance of e-learning in health professions education in Iran based on the technology acceptance model (TAM). *Scientific Reports*, *15*(1), 1–14. https://doi.org/10.1038/s41598-025-90742-5

Mobaderi, T., Kazemnejad, A., & Salehi, M. (2025). Clustering and modeling joint-trajectories of HIV/AIDS and tuberculosis mortality rates using bayesian multi-process latent growth model: A global study from 1990 to 2021. *BMC Infectious Diseases*, *25*(1). https://doi.org/10.1186/s12879-025-10715-x

Mohajeri, M., Momenai, R., Karami-Mohajeri, S., Ohadi, M., & Raeisi Estabragh, M. A. (2025). Curcumin as a Natural Therapeutic Agent: A Rapid Review of Potential Clinical Uses and Mechanisms of Action. *Iranian Journal of Pharmaceutical Research*, *24*(1), 1–13. https://doi.org/10.5812/ijpr-156983

Sarıyalçınkaya, A. D., Çoruh, U., & Sarıyalçınkaya, E. (2025). Analysis of Student Achievement in the Context of Semantic Web Application in English Education. *International Journal of Computational and Experimental Science and Engineering*, *11*(1), 1528–1535. https://doi.org/10.22399/ijcesen.1371

Steiner, L., Carley-Rizzuto, K., & Zambak, V. S. (2025). Promoting children's achievement in mathematics using literacy strategies: A school-based intervention to increase parental involvement in children's mathematical learning. *Journal of Interdisciplinary Studies in Education*, *14*(1), 132–145. https://doi.org/10.32674/1jrw8622

Zhao, L., Liu, J., Karimov, A., & Saarela, M. (2025). Assessing and developing college students' digital learning power: an empirical study based on questionnaire survey in a Chinese university. *International Journal of Educational Technology in Higher Education*, *22*(1). https://doi.org/10.1186/s41239-025-00514-4

Zhong, X., Lu, G., & Li, H. (2025). Vision Mamba and xLSTM-UNet for medical image segmentation. *Scientific Reports*, *15*(1), 1–12. https://doi.org/10.1038/s41598-025-88967-5

Zou, X., & Xie, B. (2025). Therapeutic Mechanisms of Phenothiazine Drugs: A

Mini-Review of Advances in Cancer Treatment and Antibiotic Resistance. *Iranian Journal of Pharmaceutical Research*, *24*(1), 1–16. https://doi.org/10.5812/ijpr-157923