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Trial and Error Approach in Educandy-Based Learning Evaluation: A Phenomenological Study on SKI Learning

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ABSTRACT
This study aims to analyze students' learning experiences in using the Educandy application as a learning evaluation medium for Islamic Cultural History (ISH), with a focus on the trial and error process that occurs during the evaluation. The study uses a qualitative phenomenological approach to deeply reveal the meaning of students' subjective experiences (lived experiences). Participants consisted of 23 students of class VII B MTsN Batu who were purposively selected based on the criteria of active attendance during the evaluation process from a total of 30 students. Data collection was carried out through in-depth semi-structured interviews, open-ended questionnaires based on Google Forms, observation, and documentation. Data were analyzed using Moustakas' phenomenological technique through the stages of epoche, horizontalization, grouping of meanings, and textural and structural descriptions, with visualization of findings presented using RStudio as a data representation tool. The results show that the use of Educandy produces a learning experience dominated by positive perceptions, where the trial and error process becomes the main learning mechanism that encourages a reflective attitude, perseverance, and courage to face mistakes. Different from previous studies that generally focus on the effectiveness of media quantitatively, this study reveals that trial and error in the digital context is not mechanistic, but rather reflective-constructive. Thus, Educandy functions not only as an evaluation tool but also as an interactive learning space that facilitates the formation of a holistic learning experience, encompassing cognitive, affective, and behavioral dimensions simultaneously. Further research is recommended using a mixed methods approach to expand the validity of the findings, examine the role of media interface design on student learning behavior, and explore the emotional dynamics and pedagogical role of teachers in facilitating digital-based evaluation in SKI learning.

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Learning evaluation, Educandy, Trial and error, Learning experience, Phenomenology.

INTRODUCTION

Learning evaluation in Islamic Religious Education (PAI), particularly in the subject of Islamic Cultural History (SKI), has tended to focus on measuring cognitive learning outcomes through conventional written tests. This type of evaluation model often positions students as passive objects of assessment, thus providing little room for active engagement and meaningful learning experiences. However, in the context of 21st-century learning, evaluation serves not only as a tool for measuring learning outcomes but also as an integral part of the learning process, encouraging engagement, reflection, and continuous improvement (Rifka Alkhilyatul Ma'rifat, I Made Suraharta, 2024; Saidah & Muhid, 2025).

With the advancement of digital technology, various interactive evaluation platforms have begun to be used in education, one of which is Educandy a game-based learning application

that enables students to learn through interactive activities. In practice, using Educandy encourages students to try, make mistakes, and repeat until they find the right answer, aligning with the trial and error concept in Thorndike (1898) behaviorist learning theory. This process involves not only cognitive dimensions, but also affective and behavioral dimensions, which interact within a holistic learning experience.

From a modern learning perspective, this process is also related to constructivism, pioneered by Piaget (1970) and Vygotsky (1978), which emphasizes that knowledge is constructed through experience and active student interaction. Furthermore, student involvement in correcting errors can be explained through Deci & Ryan (1985)self-determination theory of motivation, which highlights the importance of intrinsic motivation, persistence, and the fulfillment of basic psychological needs in the learning process. Thus, the use of Educandy in learning evaluation can be understood as a pedagogical practice that simultaneously integrates behavioristic, constructivist, and motivational dimensions an integration that has not been widely studied qualitatively, particularly in the context of SKI learning.

Several previous studies indicate that game-based and digital learning media contribute to improving student motivation and learning outcomes. The use of Educandy has proven effective at both elementary and secondary school levels because it provides interactive and fun learning activities, and is easily accessible as a web-based platform (Fakhrunnisaa & Mardiawati, 2023; Putri & Trisnawati, 2024). In SKI learning, various method and media innovations such as mnemonic learning, the Bamboo Dancing model, mind mapping, video media, and the use of digital platforms such as Google Classroom, Smart TV, and Canva, have increased student interest, engagement, and learning outcomes (Atika Alwinda & Satria Wiguna, 2022; Biantoro, 2024; Isroani, 2021; Mufliah & Puspita W, 2024; Rifka Alkhilyatul Ma'rifat, I Made Suraharta, 2024b; Wada & Tohet, 2024). Furthermore, game-based evaluation media such as Kahoot and Wordwall have also been shown to encourage student learning activities, motivation, and understanding in Islamic Religious Education and Islamic Studies (PAI) and Islamic Religious Studies (ISK) (Fauzih, Puadah, Hasanah, Luthfi, & Rasyid, 2022; Hadijah, Azis, & Afifah, 2025; Kinasih, 2026).

However, there is a significant research gap that remains unaddressed by these studies. Most previous research focuses on media effectiveness, improving learning outcomes, and student motivation through quantitative or research and development approaches. Consequently, two important dimensions remain overlooked: first, students' subjective experiences (lived experiences) in undergoing digital-based evaluation; and second, the dynamics of the trial and error process as a mechanism for developing understanding, not simply a strategy for answering questions. Therefore, this study offers a novel approach by examining the meaning of students' experiences phenomenologically in using Educandy as an evaluation medium for Islamic Religious Studies (ISK) learning a perspective that has not been explored in the existing literature.

Based on this description, this study seeks to answer three main questions: (1) What are students' experiences using Educandy as an evaluation medium for Islamic Religious Studies (ISK) learning? (2) How does the trial and error process occur in using Educandy?; and (3) What is the meaning of this experience for the student learning process?

This study aims to describe students' learning experiences using Educandy in SKI learning evaluations, identify the trial and error processes that occur, and understand the meaning of these experiences in helping students build understanding of the material. This study argues that digital-based learning evaluations, such as Educandy, not only function as a tool for measuring learning outcomes, but also as a learning space that allows students to experience trial and error

actively and reflectively. Through this process, students not only obtain correct answers but also build understanding through the experience of trying, failing, and correcting mistakes a process that has the potential to shift the function of evaluation from mere measurement to an integral part of learning itself.

RESEARCH METHODS

This study used a qualitative approach with a phenomenological approach to understand students' lived experiences using the Educandy application as a learning evaluation tool for SKI. The phenomenological approach was chosen because it focuses on the depth of meaning of students' experiences through trial and error, rather than on the breadth of time or the generalizability of findings (Creswell, 2014; Moustakas, 1994).

The study was conducted at MTsN Batu in the even semester of the 2025/2026 academic year, focusing on a single intensive learning evaluation session. The selection of this single evaluation session was based on the consideration that the phenomenological experience being studied was specific and context-bound-that is, students' direct experiences interacting with Educandy in authentic evaluation situations. Therefore, a single intensive session was deemed more adequate to capture the depth of these experiences than observations spread over a long period of time (Moustakas, 1994). Participants were purposively selected based on active attendance during the evaluation process, resulting in 23 participants from a total of 30 grade VII B students at MTsN Batu (Palinkas et al., 2015).

Data were collected through in-depth semi-structured interviews (Kvale & Brinkmann, 2009), observations of student behavior, such as repetition rate and response to errors, an open-ended Google Forms questionnaire as a supporting instrument to strengthen and verify interview data, and documentation in the form of screenshots of activities, evaluation results, and learning tools. The primary research instrument was the researcher, with supporting instruments consisting of interview guides, observation sheets, and documentation guides. Data analysis was conducted using Moustakas (1994) phenomenological technique, which included the stages of epoche, horizontalization, meaning grouping, textural and structural description, and meaning synthesis. To support systematic data management, this study also adapted the interactive model of Miles, Huberman, & Saldaña (2014), which encompasses data reduction, data presentation, and conclusion drawing. This model served not as the primary analytical framework but as a data management guide that complemented Moustakas's phenomenological procedures. Data validity was tested through source and technique triangulation, member checking, and prolonged engagement (Lincoln & Guba, 1985).

To support the presentation of the results, this study utilized RStudio software as a data visualization tool to clarify the distribution of themes and patterns of student experiences derived from the phenomenological analysis. This software, not as the primary analytical tool, served as a visual representation to help readers understand the findings more intuitively.

RESEARCH RESULTS

Results

Table 1. Informant Profile

Initial Name	Code	Gender	Ever Used Educandy	Class
A F	L1	Male	Yes	VII B
B N	L2	Male	Yes	VII B
A N K P	L3	Male	Yes	VII B
N A A W.	L4	Male	Yes	VII B
A P Y	L5	Male	Yes	VII B
A R M	L6	Male	Yes	VII B
K L Z	L7	Male	Yes	VII B
M A C A	L8	Male	No	VII B
M K A B	L9	Male	Yes	VII B
J S A	P1	Female	Yes	VII B
H N	P2	Female	Yes	VII B
S E A	P3	Female	Yes	VII B
A	P4	Female	Yes	VII B
R K I	P5	Female	Yes	VII B
A N Z. S	P6	Female	Yes	VII B
R M P	P7	Female	Yes	VII B
A N E	P8	Female	Yes	VII B
L A R	P9	Female	No	VII B
N A M	P10	Female	Yes	VII B
A A R	P11	Female	Yes	VII B
Z A N	P12	Female	Yes	VII B
N M N	P13	Female	Yes	VII B
T K R	P14	Female	Yes	VII B

Based on respondent profile data, the number of students participating in this study was 23, all from class VII B. In terms of gender, respondents consisted of 9 male students and 14 female students, resulting in a greater female participation rate than male students. Based on their

experience using the Educandy application, the majority of students had direct experience in learning evaluation activities. Of the total respondents, 21 students stated they had used Educandy, while only 2 students had never used it. This indicates that the data obtained is relevant for exploring trial and error experiences in the context of learning evaluation.

The predominance of respondents who had used Educandy also indicates that the tool is well-known and implemented in SKI learning in class VII B, thus providing an opportunity for researchers to obtain richer data regarding students' experiences in trial and error, making mistakes, and correcting answers. Meanwhile, the presence of two students who had never used Educandy remains important as a comparison to understand differences in experience and the adaptation process to digital-based evaluation, thus providing additional perspectives for the research analysis.

Student Experience Using Educandy

Based on interviews and an open-ended questionnaire with 23 grade VII B students, their experience using Educandy as a means of evaluating SKI showed a predominantly positive trend. Most students considered learning to be more exciting, enjoyable, and less boring than conventional evaluations. The main theme that emerged was "exciting and enjoyable," as expressed by several participants (P1, L1, P3), who emphasized the entertainment aspect as well as the ease of understanding the material.

Furthermore, students also linked this experience to the concept of learning through play. P2 stated that he "felt very happy because he could learn while playing games," while L3 and P14 emphasized that Educandy made it possible to "learn and play at the same time." These findings indicate that integrating game elements into evaluations can increase engagement and motivation in SKI learning. These findings are reinforced by the visualization of the theme categories of student experiences presented in Figure 1 below.

Figure 1. Categories of Student Experience Themes in Using Educandy



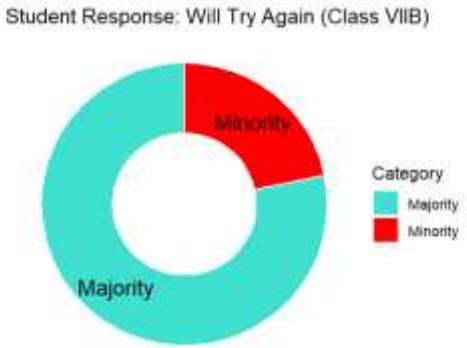
Based on Figure 1, words such as "happy," "enjoyable," and "fun" emerged as dominant themes, indicating that the majority of students had a positive experience using Educandy. This is reflected in L8's statement that learning became "simpler and easier to understand," and P9's statement that using Educandy "felt easy to understand and still fun." These findings confirm that the interactive features in Educandy contribute to creating a fun learning environment while helping students understand the SKI material more meaningfully.

However, there was a variation in experiences, indicating an adaptation process. L5 stated that she felt "confused and didn't know how to use it," while P11 stated that "I was a bit confused at first, but after trying it, I understood better." On the other hand, neutral responses also emerged, such as L9's statement that using Educandy was "just so-so, nothing particularly interesting." Overall, these findings confirm that the use of Educandy in the SKI evaluation was dominated by positive experiences that created more interactive and enjoyable learning, although there were still differences in experiences depending on student characteristics and preferences.

Students' Trial and Error Process Using Educandy

One important indicator of the trial and error process is students' encouragement to try again after making a mistake. Interviews revealed that the majority of 23 grade VII B students tended to repeat problems until they obtained the correct answer. This finding confirms that Educandy serves not only as an evaluation tool but also as a learning space that encourages perseverance, the courage to face mistakes, and the motivation to improve answers. Therefore, this game-based evaluation process fosters an active and reflective attitude in SKI learning.

Figure 2. Student Response to Retry in Educandy Evaluation

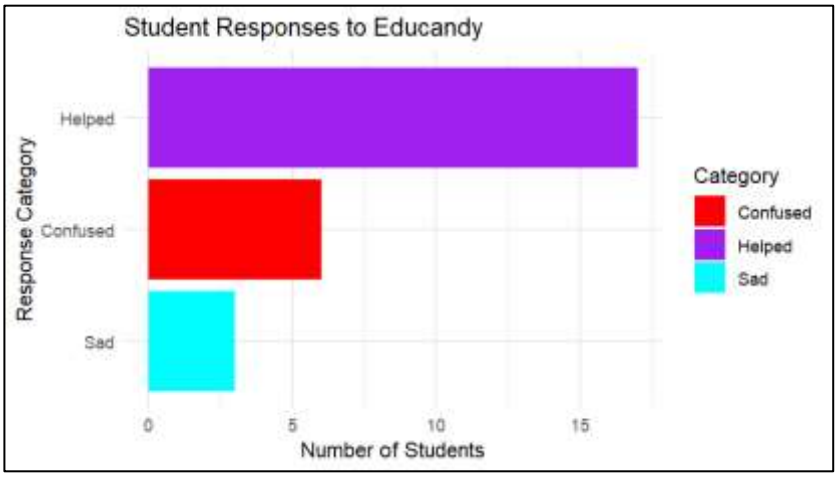


Based on Figure 2, most students showed a tendency to try again when they made a mistake, while only a small number chose to discontinue. This finding confirms that the majority of students consider repetition part of the learning process, thus Educandy-based evaluation encouraged them not to give up on mistakes but to instead embrace them as part of the learning process. This aligns with P2's statement that "if I make a mistake, I keep repeating it until I get it right," and P5's statement that "I try again until I get it," indicating an internal drive to correct mistakes through repetition.

This finding confirms that the trial and error process through Educandy serves not only as an evaluation but also as a learning tool that fosters students' perseverance, motivation, and courage in the face of mistakes. Students' repetition is an important indicator that game-based media can foster a reflective attitude while strengthening their understanding of SKI material.

The Meaning of Trial and Error Experience.

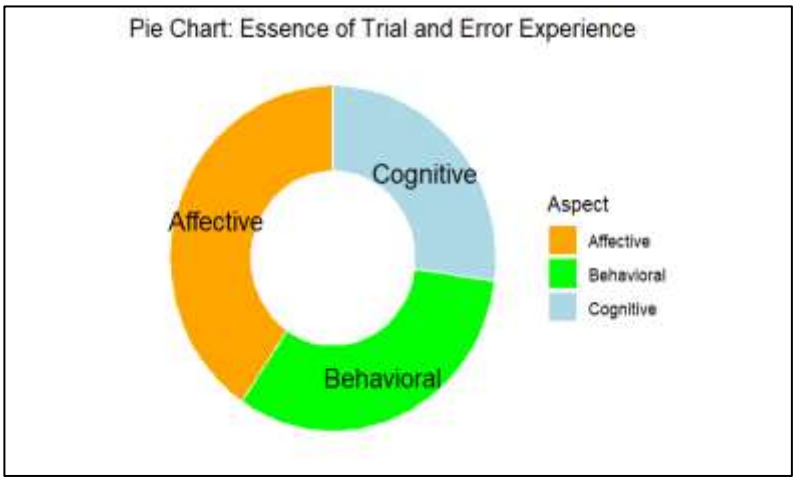
Figure 3. Students' Emotional Responses in Educandy-Based Evaluation



Based on Figure 3, the response "helped" emerged as the most dominant category, indicating that the majority of students found it easier to understand the material through a process of trial and error. This is reinforced by L8's statement that learning became "simpler and easier to understand," and P6's statement that using Educandy "felt easy to understand and still fun." These findings confirm that Educandy's interactive features contribute to a more effective and enjoyable learning experience.

However, emotional dynamics were also evident in the initial stages of media use. Some students, such as L5, who felt "confused and didn't know how to use it," and P11, who stated, "I was a bit confused at first, but after trying it, I understood better," indicating a process of adaptation to digital learning. On the other hand, neutral responses also emerged, such as L9, who considered the experience using Educandy "so-so, nothing particularly interesting." Overall, these findings confirm that the use of Educandy in SKI evaluations involves not only cognitive aspects but also emotional aspects that play a role in shaping student understanding, with a predominance of positive experiences but still allowing for variation according to individual characteristics and preferences.

Figure 4: The essence of trial and error experience in Educandy-based evaluation



The findings of this study are synthesized into three main aspects: cognitive, affective, and behavioral. Based on Figure 4 above, the affective aspect emerged as the most dominant dimension, demonstrated by students' feelings of help, motivation, and increased self-confidence in the learning process. The behavioral aspect is reflected in students' active retry, repetition, and persistence in solving problems. Meanwhile, the cognitive aspect is evident in students' ability to gradually understand the material through mistakes and corrections.

These three aspects interact with each other and form a unified learning experience. Thus, the essence of the trial and error experience in Educandy-based evaluation lies not only in successfully obtaining correct answers, but also in the simultaneous formation of students' attitudes, behaviors, and understanding. These findings confirm that game-based learning can create cognitive, affective, and behavioral dynamics that enrich students' learning experiences.

DISCUSSION

The findings of this study indicate that the use of Educandy in the evaluation of Islamic Cultural History (ISHC) learning not only functions as a measuring tool for learning outcomes, but also as a medium that creates an interactive, reflective, and meaningful learning experience. The dominance of positive experiences of students who considered the evaluation more "exciting," "enjoyable," and "not boring" is indeed consistent with previous research findings regarding the effectiveness of game-based media in improving motivation and learning outcomes (Alifiana Bagas Putri, Hidayah, & Negara, 2025; Fakhrunnisaa & Mardiawati, 2023; Ferdianti & Anwar, 2023; Halimah & Jasiah, 2025; Putri & Trisnawati, 2024). However, upon further examination, these findings do not simply confirm this effectiveness, but rather reveal a deeper dimension, namely the epistemological shift in how students interpret evaluation from a product-oriented activity to a process-oriented learning experience. This shift represents a conceptual contribution that has not been widely discussed in the literature on digital-based evaluation, particularly in SKI learning.

In the context of SKI learning, which is steeped in historical narratives, the use of Educandy enables students not only to memorize facts but also to more actively understand the relationships between events through trial-and-error exploration. This demonstrates that game-based evaluation media has the potential to shift the approach to SKI learning from merely transmitting information to constructing a more meaningful historical understanding. Thus, the evaluation function is no longer terminal but becomes an integral part of the learning process itself, in line with the principle of assessment for learning (Black & Wiliam, 1998). Furthermore, these findings extend Black and Wiliam's argument by demonstrating that in a game-based digital context, assessment for learning occurs not only through teacher feedback but also through automated mechanisms built into the media design itself.

The students' playful learning experiences indicate a simultaneous engagement between cognitive and affective dimensions. However, this engagement cannot be fully explained solely through the framework of game-based learning (Gee, 2003; Prensky, 2001). The findings of this study indicate that this engagement is also influenced by how students interpret mistakes as part of the learning process, an aspect that has received little attention in game-based learning research, which generally focuses solely on motivational and cognitive outcomes. The emergence of trial and error is a key finding, demonstrating that students do not simply respond to stimuli but also actively reflect on their mistakes.

While conceptually, this finding can be linked to Thorndike (1898) theory of trial and error learning, the results of this study demonstrate that in the context of digital learning, the process is not entirely mechanistic as in classical behaviorism. Instead, the trial and error experienced by students tends to be reflective-constructive, where errors are not simply stimuli that trigger repeated responses but rather serve as sources of information that encourage students to build understanding gradually and meaningfully. Thus, these findings indicate that Thorndike's trial and error theory needs to be expanded when applied in a digital context from a linear stimulus-response mechanism to an iterative reflection process, in line with the constructivist perspective (Piaget, 1970; Vygotsky, 1978).

The shift in students' perspectives on errors was a crucial aspect that emerged in this study. In conventional assessments, errors tend to be associated with failure and often trigger academic anxiety. However, in the context of using Educandy, errors serve as a formative feedback mechanism that encourages independent exploration and improvement. This finding aligns with the concept of "productive failure" developed by Kapur (2016), which suggests that structured failure experiences can actually deepen students' understanding compared to direct instruction. However, it's important to note that this change doesn't occur automatically in all students; some students still experience initial confusion, indicating that the effectiveness of digital-based assessments remains dependent on student readiness and teacher pedagogical support.

From an affective perspective, the predominance of "helped" responses indicates that students felt emotional support during the learning process, which can be linked to the fulfillment of basic psychological needs such as competence, autonomy, and relatedness in Self-Determination theory (Deci & Ryan, 2000). Interestingly, the fulfillment of these needs does not come from social interactions with teachers or peers, but rather from students' interactions with the media design itself, a phenomenon that can be called "technology-mediated affective engagement." However, the variety of responses that emerged, including confusion and neutrality in some students, indicates that the emotional experience of digital-based learning is dynamic, contextual, and cannot be uniformly generalized.

Behavioral-wise, students' tendency to repeat tasks reflects active engagement that goes beyond simply following instructions. However, it is important to note that this persistence does not solely reflect intrinsic motivation but also results from media design that allows repetition without negative consequences (low-stakes repetition). This suggests that interface design plays a strategic role in shaping students' learning behavior, an important implication for future developers of digital evaluation media.

From a cognitive perspective, the trial and error process allows students to gradually build understanding through immediate and iterative feedback mechanisms. This process reinforces the view that learning is not always linear Piaget (1970), and in the context of game-based learning, it is highly relevant because it allows students to understand the interconnectedness of historical events more deeply, not simply memorizing chronology but actively constructing historical narratives.

The synthesis of these three cognitive, affective, and behavioral aspects demonstrates that the learning experience through Educandy is holistic and multidimensional, going beyond what can be explained by a single theoretical framework. This finding aligns with Bloom's (1956) taxonomy of learning, which emphasizes the integration of various domains, but also challenges the assumption that these three domains can be clearly distinguished in the context of game-based

learning. In practice, these three domains exist simultaneously and reinforce each other in a cohesive learning experience.

Compared with previous research that generally focused on improving learning outcomes and motivation through quantitative approaches (Fauzih et al., 2022; Hadijah et al., 2025; Kinasih, 2026), this study offers a different perspective: examining the meaning of learning experiences phenomenologically, rather than simply measuring media effectiveness. Thus, this research's contribution is complementary, filling a research gap not yet addressed by quantitative approaches: the subjective and reflective dimensions of students' experiences in digital-based evaluation.

Theoretically, these findings indicate the need to expand existing game-based learning frameworks to accommodate the reflective dimension of trial and error processes in digital evaluation contexts. Practically, these research findings confirm that the role of teachers cannot be replaced by media. Rather, the successful implementation of Educandy depends heavily on how teachers design evaluations that are not only technologically engaging but also pedagogically and contextually meaningful.

CONCLUSION

This study concludes that the use of Educandy in evaluating Islamic Cultural History (ISHI) learning not only serves as an assessment tool but also as a learning space that facilitates interactive, reflective, and meaningful experiences. The integration of game elements encourages high student engagement, reflected in the dominance of positive experiences such as enjoyment, interest, and persistence during the evaluation process.

The main findings of this study indicate that trial and error is a significant learning mechanism, where mistakes are no longer interpreted as failures but rather as an integral part of the learning process that fosters reflection, perseverance, and courage in the face of adversity. Furthermore, this study found that trial and error in the digital context is not entirely mechanistic, as in Thorndike's classical behaviorist theory, but rather tends to be reflective-constructive a conceptual nuance that broadens the understanding of how classical learning theory operates in the context of digital technology.

Students' learning experiences through Educandy-based evaluations have been proven to be holistic, encompassing cognitive, affective, and behavioral dimensions that interact simultaneously. This confirms that game-based evaluations have the potential to shift the function of evaluation from simply measuring outcomes to becoming an integral part of the learning process itself, in line with the principles of assessment for learning.

However, the limitations of this study, conducted within a single classroom using a purely phenomenological approach, make the findings contextual. Further research is recommended using a mixed methods approach to expand the validity of the findings, examine the role of media interface design on student learning behavior, and explore the emotional dynamics and pedagogical role of teachers in facilitating digital evaluation-based learning, particularly in supporting the development of a deeper historical understanding in SKI learning.

REFERENCES

Alifiana Bagas Putri, Hidayah, N., & Negara, H. S. (2025). Pengaruh Pendekatan TPACK Berbantuan Media Educandy Terhadap Hasil Belajar Bahasa Indonesia Kelas V di MIN 1 Metro. *Pediaqu : Jurnal Pendidikan Sosial Dan Humaniora*, *4*(2), 2572–2581.

Atika Alwinda, & Satria Wiguna. (2022). Upaya Meningkatkan Hasil Belajar Siswa Melalui Model Pembelajaran Bamboo Dancing Pada Mata Pelajaran Sejarah Kebudayaan Islam di Kelas VIII MTS Al-Hidayah Gebang. *Dewantara : Jurnal Pendidikan Sosial Humaniora*, *1*(4), 155–166. doi:10.30640/dewantara.v1i4.450

Biantoro, O. F. (2024). Efektifitas Media Video dalam Pembelajaran Sejarah Kebudayaan Islam di Madrasah Diniyah. *Afeksi: Jurnal Penelitian Dan Evaluasi Pendidikan*, *5*(2), 222–233. doi:10.59698/afeksi.v5i2.247

Black, P., & Wiliam, D. (1998). Assessment and classroom learning. *Assessment in Education: Principles, Policy & Practice*, *5*(1), 7–74.

Bloom, B. S. (1956). *Taxonomy of educational objectives: The classification of educational goals. Handbook I: Cognitive domain*. New York: David McKay Company.

Creswell, J. W. (2014). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. Thousand Oaks, CA: Sage.

Deci, E. L., & Ryan, R. M. (1985). *Intrinsic motivation and self-determination in human behavior*. Plenum.

Deci, E. L., & Ryan, R. M. (2000). The "what" and "why" of goal pursuits: Human needs and the self-determination of behavior. *Psychological Inquiry*, *11*(4), 227–268.

Fakhrunnisaa, N., & Mardiawati. (2023). Pengaruh Game Edukasi Berbasis Educandy Terhadap Motivasi Belajar Pendidikan Agama Islam (PAI) Kelas V Pada SD 103 Bontompare. *Jurnal MediaTIK : Jurnal Media Pendidikan Teknik Informatika Dan Komputer*, *6*(1), 2–6.

Fauzih, H., Puadah, P., Hasanah, S. U., Luthfi, A., & Rasyid, H. (2022). Aplikasi Game Kahoot Dalam Belajar Untuk Meningkatkan Kegiatan Belajar Siswa Dalam Mainkan Pelajaran Iman Kepada Rasul Allah. *Journal of Islamic Education Studies*, *1*(1), 1–9. doi:10.58569/jies.v1i1.432

Ferdianti, S., & Anwar, A. S. (2023). Pemanfaatan Media Pembelajaran Educandy Berbasis Games Edukasi pada Pelajaran Matematika untuk Meningkatkan Hasil Belajar Kognitif Siswa Sekolah Dasar PENDAHULUAN Pendidikan adalah usaha sadar dan terencana untuk mewujudkan suasana belajar dan proses pemb. *JURNAL LENSA PENDAS*, *8*, 17–22.

Gee, J. P. (2003). *What video games have to teach us about learning and literacy*. Palgrave Macmillan.

Hadijah, S., Azis, A., & Afifah, N. (2025). Pemanfaatan Aplikasi Kahoot Sebagai Media Pembelajaran Pada Mata Pelajaran SKI di MA Darul Ulum Palangka Raya. *Jurnal Sosial Humaniora Dan Pendidikan*, *4*(2), 555–567. doi:10.55606/inovasi.v4i2.4110

Halimah, & Jasiah. (2025). Pengembangan Media Interaktif Educandy Untuk Meningkatkan. *AL-Ilmiya : Jurnal Pendidikan Islam*. Retrieved from www.educandy.com,

Isroani, F. (2021). Pemanfaatan Media Google Classroom. *Jurnal Komunikasi Dan Penyiaran Islam*, *5*, 51–68.

Kapur, M. (2016). Examining productive failure, productive success, unproductive failure, and unproductive success in learning. *Educational Psychologist*, *51*(2), 289–299.

Kinasih, A. D. (2026). Implementasi Media Evaluasi Pembelajaran Berbasis Game Wordwall Pada Mata Pelajaran Sejarah Kebudayaan Islam di MA Darul Ulum Palangka Raya. *Kamaya: Jurnal Ilmu Agama*, *9*, 119–128.

Kvale, S., & Brinkmann, S. (2009). *Interviews: Learning the craft of qualitative research interviewing* (2nd ed.). Thousand Oaks, CA: SAGE Publications.

Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Beverly Hills, CA: SAGE Publications.

Miles, M. B., Huberman, A. M., & Saldaña, J. (2014). *Qualitative data analysis: A methods sourcebook* (3rd ed.). Thousand Oaks, CA: SAGE Publications.

Moustakas, C. (1994). *Phenomenological research methods*. Thousand Oaks, CA: SAGE Publications.

Mufliah, M., & Puspita W, D. M. A. (2024). Peningkatan Motivasi Belajar Siswa melalui Inovasi

Pembelajaran SKI Berbasis Smart TV di MTs Irsyadun Nasyi'in. *Jurnal Pendidikan Dan Pembelajaran Indonesia (JPPI)*, *4*(4), 1539–1554. doi:10.53299/jppi.v4i4.802

Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration and Policy in Mental Health and Mental Health Services Research*, *42*(5), 533–544.

Piaget, J. (1970). *Science of education and the psychology of the child*. New York: Orion Press.

Prensky, M. (2001). Digital natives, digital immigrants. *On the Horizon*, *9*(5), 1–6.

Putri, L. A. I., & Trisnawati, N. (2024). Pengaruh Media Pembelajaran Berbasis Educandy Game terhadap Motivasi dan Hasil Belajar Siswa SMK. *Edukatif : Jurnal Ilmu Pendidikan*, *6*(4), 3059–3070. doi:10.31004/edukatif.v6i4.7204

Rifka Alkhilyatul Ma'rifat, I Made Suraharta, I. I. J. (2024a). Asesmen Abad 21: Menakar Kompetensi, Bukan Sekedar Nilai. *Didaktik : Jurnal Ilmiah PGSD FKIP Universitas Mandiri*, *2*(2022), 306–312.

Rifka Alkhilyatul Ma'rifat, I Made Suraharta, I. I. J. (2024b). Pengembangan Media Pembelajaran Berbasis Media Infografis Menggunakan Aplikasi Canva Untuk Meningkatkan Kreativitas dan Hasil Belajar Siswa Di SMKN 6 Surabaya. *Syntax Literate: Jurnal Ilmiah Indonesia*, *2*(11), 306–312.

Saidah, A., & Muhid, A. (2025). Transformasi Evaluasi Pendidikan di Era Digital : Integrasi Asesmen Autentik dan Learning Analytics. *Action Research Journal Indonesia (ARJI)*, *7*(4). doi:10.61227/arji.v7i4.608

Thorndike, E. L. (1898). Animal intelligence: An experimental study of the associative processes in animals. *Psychological Review Monograph Supplements*, *2*(4), i–109.

Vygotsky, L. S. (1978). *Mind in society: The development of higher psychological processes*. Cambridge, MA: Harvard University Press.

Wada, N., & Tohet, M. (2024). Inovasi Pembelajaran Sejarah Kebudayaan Islam Dalam Meningkatkan Minat Belajar Siswa Di Madrasah Tsanawiyah Negeri 1 Probolinggo. *Jurnal Penelitian Dan Pemikiran Keislaman*, *11*(2), 166–172.