

Needs Analysis of an SRL-Based E-Magazine Learning Medium in Islamic Cultural History Learning at MA Annaim Ajisoko

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ABSTRACT

The development of digital learning media has become increasingly important in supporting students' active engagement and learning independence. This study aims to analyze the need for an e-magazine-based learning medium to support self-regulated learning (SRL) in Islamic Cultural History (Sejarah Kebudayaan Islam or SKI) at MA Annaim Ajisoko. A mixed-methods approach with an explanatory sequential design was employed by combining quantitative and qualitative data. The participants were 31 Grade XI students selected through saturated sampling. Data were collected using a self-regulated learning questionnaire, teacher interviews, and classroom observations. Quantitative data were analyzed descriptively using percentage scores, while qualitative data were analyzed through reduction, coding, and thematic interpretation. The findings show that students' SRL level remains in the moderate category, with metacognition reaching 67.90%, motivation 66.20%, and behavior 65.65%. The media needs analysis indicates a high level of demand, with an overall mean of 77.90%. Observations and interviews reveal that SKI learning still relies heavily on textbooks and lecture-based instruction, limiting students' active participation and independent learning.

Informasi Artikel

Kata Kunci:

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ABSTRAK

Perkembangan media pembelajaran digital menjadi semakin penting dalam mendukung keterlibatan aktif dan kemandirian belajar siswa. Penelitian ini bertujuan untuk menganalisis kebutuhan media pembelajaran berbasis e-magazine dalam mendukung self-regulated learning (SRL) pada mata pelajaran Sejarah Kebudayaan Islam (SKI) di MA Annaim Ajisoko. Penelitian ini menggunakan pendekatan mixed methods dengan desain explanatory sequential yang mengombinasikan data kuantitatif dan kualitatif. Subjek penelitian terdiri atas 31 siswa kelas XI yang dipilih melalui teknik sampling jenuh. Data dikumpulkan melalui angket self-regulated learning, wawancara guru, dan observasi kelas. Data kuantitatif dianalisis secara deskriptif menggunakan persentase, sedangkan data kualitatif dianalisis melalui reduksi data, pengodean, dan interpretasi tematik. Hasil penelitian menunjukkan bahwa tingkat SRL siswa masih berada pada kategori sedang, dengan capaian aspek metakognisi sebesar 67,90%, motivasi 66,20%, dan perilaku 65,65%. Analisis kebutuhan media menunjukkan tingkat kebutuhan yang tinggi dengan rata-rata keseluruhan sebesar 77,90%.

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1. Pendahuluan

History learning, including Islamic Cultural History (Sejarah Kebudayaan Islam or SKI), is often perceived as a monotonous subject because its instructional practices tend to remain teacher-centered, emphasize cognitive aspects, and focus heavily on memorizing events, figures, places, and dates [14]. As a result, history learning is frequently viewed as boring and provides limited opportunities for students to think critically, engage in discussion, reflect on values, and relate the learning materials to everyday life. This condition may contribute to students' low interest in learning SKI, although the subject should ideally provide exemplary values, inspiration, and contextual understanding that are relevant to contemporary social, cultural, and moral issues.

Boring learning experiences may generate negative emotions that affect students' engagement, attention, and understanding of the learning materials [17]. Academic boredom has also been shown to have a negative relationship with students' motivation, learning outcomes, and engagement in the learning process [41], [43]. In the context of digital learning, boredom not only directly influences students' learning experiences but may also function as a mediating variable that reduces their engagement in learning activities [21]. Therefore, innovation in SKI learning is needed to make the learning process more engaging, interactive, and meaningful, so that students do not merely receive historical information passively, but are also able to derive values, engage in reflection, and develop self-regulated learning.

History lessons are often perceived as having monotonous instructional patterns because they tend to emphasize cognitive aspects, memorization of events, figures, dates, and places. As a result, history learning is frequently viewed as boring and repetitive [14]. This condition also contributes to students' low interest in learning Islamic Cultural History (Sejarah Kebudayaan Islam or SKI), although SKI should ideally provide exemplary values, inspiration, and reflective understanding that can be applied in everyday life. When SKI learning is delivered only through lectures and memorization, students tend to become passive and are less able to connect historical materials with contemporary life contexts.

Boring learning experiences represent a form of negative emotion that significantly affects students' engagement, attention, and understanding of the material being taught [17]. Academic boredom has also been shown to have a negative correlation with motivation and learning outcomes, as well as to reduce students' engagement in the learning process [43]. In the context of digital learning, boredom may even function as a mediating variable that influences students' learning engagement [21]. Therefore, SKI learning requires more engaging, varied, and interactive instructional strategies and learning media so that students do not merely receive material passively, but are actively involved in understanding, reflecting on, and deriving values from Islamic historical events.

In line with this issue, the learning paradigm in the twenty-first century has shifted from teacher-centered learning to student-centered learning. Students are no longer viewed as passive objects in the learning process, but rather as active subjects who are capable of managing, planning, monitoring, and evaluating their own learning processes [29]. This shift is also consistent with the demands of twenty-first-century competencies, which emphasize critical thinking, creativity, communication, and collaboration as essential skills that students need in order to face increasingly complex global challenges [11]. In this context, independent learning becomes an important aspect that should be developed through the learning process.

This concept is known as self-regulated learning (SRL), which refers to an individual's ability to regulate the learning process independently through metacognitive, motivational, and behavioral strategies [38]. Students with strong SRL skills tend to be able to set learning goals, manage time, monitor their understanding, maintain motivation, and evaluate their learning outcomes independently. Furthermore, students with a high level of SRL generally demonstrate better academic achievement, more effective problem-solving abilities, and stronger learning motivation [33]. Therefore, strengthening SRL in SKI learning is essential so that students not only understand historical materials cognitively, but also develop learning independence and derive exemplary values from Islamic history.

E-magazine, or electronic magazine, is a digital learning medium with strong potential to support self-regulated learning (SRL) because it can present learning materials in a varied, visual, informative, and interactive manner through articles, infographics, illustrations, reflective sections, and independent exercises [34]. As instructional material, an e-magazine offers advantages in delivering content systematically, attractively, and flexibly, as it can be accessed anytime and anywhere, allowing students to learn according to their individual needs and learning pace [30]. In digital learning contexts, the integration of text, images, and interactive visual elements can also enhance students' attention, understanding, and engagement in the learning process [23], [24]. Moreover, a well-structured e-magazine can incorporate SRL elements such as learning objectives, self-monitoring, self-evaluation, learning reflection, and independent practice, which help students plan, monitor, and evaluate their learning processes independently [33], [38].

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students' attention, understanding, and engagement in the learning process [23], [24]. Moreover, a well-structured e-magazine can incorporate SRL elements such as learning objectives, self-monitoring, self-evaluation, learning reflection, and independent practice, which help students plan, monitor, and evaluate their learning processes independently [33], [38].

Based on interviews and observations conducted at MA Annaim Ajisoko, the teaching of Islamic Cultural History (SKI) in Grade XI is still dominated by textbooks as the main learning medium, while the available media have not fully motivated students or explicitly fostered their learning independence. This condition is reflected in students' low initiative to read learning materials, their dependence on teacher instructions, their limited habit of taking notes as a form of information processing, their tendency to postpone assignments, and their passiveness in asking questions even when they do not fully understand the material. These findings indicate the need for innovative learning media that are not only visually appealing but also capable of promoting active engagement, reflection, and students' independent learning. Therefore, the development of an SRL-based e-magazine is relevant for SKI learning, as it can guide students to understand the material, conduct self-evaluation, and connect the values of Islamic history with everyday life in a more independent and meaningful way.

Therefore, this study aims to: (1) identify the current condition of Islamic Cultural History (SKI) learning, particularly in relation to the use of instructional media; (2) analyze the needs of students and teachers for an SRL-based e-magazine learning medium; and (3) formulate the basic specifications of an SRL-based e-magazine that aligns with the pedagogical characteristics of SKI learning. The findings of this study are expected to provide a strong empirical and theoretical foundation for the development of an SRL-based e-magazine as an innovative instructional medium for SKI. Such a medium is intended not only to enhance the effectiveness and attractiveness of the learning process, but also to foster students' active engagement, reflective thinking, and learning independence in accordance with the demands of twenty-first-century education.

2. Methods

This study employed a mixed-methods approach using an explanatory sequential design. This design integrates quantitative and qualitative methods in a sequential manner, in which quantitative data are collected and analyzed in the initial phase, followed by qualitative data collection and analysis to explain, elaborate, and provide deeper interpretation of the quantitative findings [5]. The quantitative approach was used to measure students' level of self-regulated learning through a questionnaire instrument, while the qualitative approach was employed to interpret the measurement results and identify the type of learning media needed to support students' learning

independence.

The participants of this study consisted of 31 students of MA Annaim Ajisoko, selected using a saturated sampling technique, in which the entire population was included as the research sample. The research instrument was a questionnaire developed based on indicators of self-regulated learning, covering metacognitive, motivational, and behavioral aspects. The questionnaire used a four-point Likert scale to measure students' level of learning independence. Through this design, the study sought not only to obtain numerical data regarding students' self-regulated learning, but also to gain a more comprehensive understanding of the learning conditions and media needs relevant to the development of an SRL-based e-magazine.

To obtain data relevant to the development of an SRL-based e-magazine, this study employed three complementary instruments, namely a self-regulated learning needs questionnaire, a teacher interview guide, and a classroom observation sheet. These instruments were designed to capture both the quantitative tendency of students' self-regulated learning and the qualitative characteristics of the existing SKI learning process. The questionnaire was constructed based on three dimensions of self-regulated learning, namely metacognition, motivation, and behavior, which were operationalized into eight measurable indicators. Each item was scored using a four-point Likert scale, allowing the researcher to quantify students' learning independence in a structured manner.

Table 1. Linearity Test Results

| Observation Aspect | Item | Item weight | Percentage Weight | Score Range | Sig. | |
|------------------------------------|-------------------|-------------|-------------------|-------------|---------|-----|
| Students' active participations | | 0.25 | 1 | 0.125 | 12.50 % | 1-4 |
| Students' self-regulated learning | | 0.20 | 2 | 0.125 | 12.50 % | 1-4 |
| Teacher motivation | | 0.15 | 3 | 0.125 | 12.50 % | 1-4 |
| Classroom and classroom management | mastery classroom | 0.20 | 5 | 0.125 | 12.50 % | 1-4 |
| Material technique | delivery | 0.20 | 6 | 0.125 | 12.50 % | |
| Learning Media and Assignemnt | | 1.00 | 7 | 0.125 | 12.50 % | 1-4 |

Source: analyzed by the author.

The teacher interview instrument was designed to obtain in-depth qualitative information regarding instructional practices, the learning process, and students' responses in Islamic Cultural History (SKI) learning. The use of interviews in this study is consistent with the explanatory sequential mixed-methods

design, in which qualitative data are used to explain and deepen the interpretation of quantitative findings [5]. The instrument consisted of 12 items distributed across three major aspects. The first aspect, learning method, included two indicators: the use of teaching methods and the use of additional learning materials. The second aspect, learning process, covered six indicators, namely the teacher's understanding of students' characteristics, learning planning, characteristics of students' self-regulated learning, learning evaluation, availability of digital learning materials, and availability of internet facilities. These indicators were formulated to examine how classroom instruction supports students' ability to plan, monitor, regulate, and evaluate their own learning processes, as emphasized in the concept of self-regulated learning [30], [32], [37], [44]. The third aspect, students' responses, consisted of four indicators: initiative and independence, engagement and active participation, learning management, and reflection. These indicators are relevant because students' engagement, participation, and reflective learning behavior are important components of meaningful learning and digital learning environments [3], [8], [21]. Through this structure, the interview instrument was intended to capture not only the teacher's instructional strategies, but also the extent to which the existing learning process supports students' self-regulated learning and the potential implementation of an SRL-based e-magazine as an innovative learning medium [29], [33].

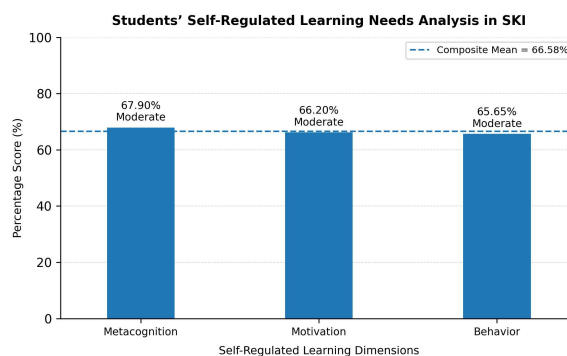
Classroom observation was also conducted as a triangulation technique to strengthen the data obtained from questionnaires and interviews. The observation sheet consisted of eight items covering several key dimensions of classroom learning, including students' active participation, students' self-regulated learning, teacher motivation, classroom mastery and management, material delivery techniques, media selection, and task assignment. This instrument enabled the researcher to examine the actual classroom conditions directly, particularly how students participated in learning activities, how independently they engaged with the material, and how the teacher facilitated the learning process. By comparing observation results with questionnaire and interview data, the researcher was able to obtain a more comprehensive and empirically grounded understanding of the learning situation.

Prior to implementation, all quantitative and qualitative instruments were validated through expert judgment by an academic advisor with a doctoral background in education. This validation process was carried out to ensure that each item had sufficient relevance, clarity, and theoretical consistency with the research objectives. The quantitative data were analyzed using descriptive statistical techniques, including frequency distribution, mean score, and percentage analysis. Meanwhile, the qualitative data obtained from interviews and observations were analyzed through data reduction, coding, identification of sub-themes, and interpretation of relationships among sub-themes. The integration of quantitative and qualitative findings provided a stronger empirical foundation for formulating the

basic specifications of an SRL-based e-magazine that is pedagogically appropriate for SKI learning.

In identifying the need for the use of e-magazines to support students' learning independence in Islamic Cultural History (Sejarah Kebudayaan Islam or SKI), this study employed three main instruments: questionnaires, interviews, and classroom observations. The use of multiple instruments is consistent with mixed-methods research, which seeks to integrate quantitative and qualitative data in order to produce a more comprehensive understanding of educational phenomena [5]. Classroom observation was conducted to obtain empirical insights into classroom dynamics, students' participation, teacher-student interaction patterns, and the forms of stimulus provided by the teacher to encourage students' self-regulated learning [33], [38].

The observations were conducted in two meetings in Grade XI Social Sciences on November 20, 2025, and December 6, 2025. The findings revealed that students' learning independence was not yet optimal. This was reflected in the low level of student participation in asking questions when they experienced difficulties in understanding the material. Most students tended to remain passive, requiring the teacher to provide repeated prompts to elicit responses and ensure their comprehension. In terms of independent learning, a small number of students had shown initiative by reading textbooks before the lesson began. However, in general, most students still depended heavily on teacher guidance in carrying out learning activities. In addition, students were not yet accustomed to conducting self-evaluation or systematic learning reflection. These conditions indicate that students' self-regulated learning skills, particularly in terms of initiative, monitoring, and self-evaluation, still require further strengthening, as SRL involves students' ability to plan, monitor, regulate, and evaluate their own learning processes [31], [33], [44].



Note. Scores represent the percentage achievement of each SRL dimension based on students' needs analysis.

Source : anlyed by author

From the perspective of the learning process, the teacher had attempted to motivate students, although these efforts had not fully succeeded in increasing the active participation of all students during the lesson. The teacher's mastery of the subject matter was considered adequate; however, classroom

management still faced several challenges, as some students were observed to be unfocused and even fell asleep during the learning process. The delivery of material was still dominated by lecture-based instruction from the beginning to the end of the lesson, with relatively limited variation in learning activities. PowerPoint was used as a learning medium, but its utilization remained suboptimal because it was still largely one-directional and had not yet created an interactive learning environment. This condition indicates that the learning media used in the classroom have not fully supported students' active engagement, whereas effective learning media should facilitate attention, interaction, and meaningful understanding [23], [24]. Furthermore, the limited use of specific assignments related to the learning material reduced students' opportunities to develop responsibility, conduct independent exploration, and reflect on their understanding of the material [38], [44].

Based on the descriptive results of the observation, one important aspect requiring attention is the need for innovative learning media that can support students' learning independence. SKI learning cannot rely solely on textbooks as the primary learning resource; rather, it requires more varied, contextual, and student-oriented media. The use of digital devices such as computers, laptops, and internet facilities provides a strategic opportunity to develop more engaging and less monotonous independent learning experiences. Digital learning media can strengthen students' engagement when they provide flexible access, interactive content, and opportunities for autonomous learning [3], [22]. Therefore, the use of innovative digital learning media, including e-magazines, has the potential to support the achievement of learning competencies while also increasing students' engagement in the learning process [30], [34].

The interview with the Grade XI SKI teacher showed that the learning process had involved several methods, including lectures, group discussions, and presentations. To support learning, students used textbooks borrowed from the school library. The teacher also stated that efforts had been made in lesson planning to foster students' learning independence, one of which was by encouraging students to improve their literacy related to the material before the lesson began. Nevertheless, students' curiosity, activeness, and learning initiative were still relatively low. Most students were not yet accustomed to independently seeking additional information from other sources, indicating that the learning process remained largely dependent on the teacher's explanations and guidance. This finding reinforces the importance of learning environments that enable students to regulate their learning goals, manage learning strategies, and develop responsibility for their own academic progress [4], [7], [16].

The interview further revealed that students with better learning independence tended to show greater enthusiasm, ask questions more actively, and demonstrate better readiness to participate in learning compared to other students. However,

students' ability to conduct self-evaluation of their learning outcomes remained limited, as only a small number of students were able to independently reflect on their level of understanding. In terms of technology use, the teacher considered digital instructional materials to play an important role in supporting independent learning, considered adequate to support the implementation of e-magazines, although the use of mobile phones in the school environment remained restricted. These findings indicate that the development of e-magazines in SKI learning is highly relevant, as it can serve as a more interactive and reflective instructional medium capable of promoting students' active participation and learning independence [6], [13], [15].

The results of the needs analysis of students' learning independence in Islamic Cultural History (*Sejarah Kebudayaan Islam* or SKI) showed that the metacognitive aspect reached 67.90%, the motivational aspect reached 66.20%, and the behavioral aspect reached 65.65%. These results indicate that students' level of learning independence remains in the moderate category. The metacognitive aspect obtained the highest score, suggesting that students already possess basic abilities to plan and understand their learning processes. However, these abilities still need to be strengthened so that they can be applied more consistently in independent learning practices. Meanwhile, the relatively lower scores in motivation and learning behavior indicate that students have not yet fully developed the ability to maintain learning motivation, manage time effectively, and study independently without depending on teacher guidance. Therefore, the development of learning media is needed, one of which is the use of e-magazine-based learning media in SKI learning. Such media are expected to support students' learning independence by providing more engaging, flexible, and self-directed learning

Based on Figure 2, the media needs analysis for Islamic Cultural History (SKI) learning materials shows that the SKI learning content aspect reached 79.52%, the learning media aspect reached 77.53%, and the learning resources aspect reached 76.08%, with an overall mean of 77.90%. These results indicate that the need for the development of learning media falls within the high category. The SKI learning content aspect obtained the highest percentage, suggesting that students require learning materials to be presented in a more engaging, comprehensible, and pedagogically relevant manner that aligns with the characteristics of contemporary learning.

The high percentages in the learning media and learning resources aspects indicate that the instructional tools currently used have not fully facilitated students' active engagement, conceptual understanding, and learning independence. This condition suggests a gap between students' learning needs and the characteristics of the available media in Islamic Cultural History (SKI) learning. In modern learning contexts, media do not merely function as tools for delivering information, but also serve as pedagogical instruments that organize content, enhance

attention, encourage interaction, and strengthen meaningful learning experiences [22], [23], [25]. Therefore, one-directional and less varied learning media may limit students' participation, particularly in learning that requires reflection, value internalization, and the connection between historical materials and real-life contexts.

Thus, the results of this needs analysis emphasize the importance of developing learning media that are more interactive, engaging, flexible, and aligned with students' characteristics. One relevant alternative to be developed is e-magazine-based learning media. E-magazines have pedagogical potential because they can integrate texts, images, infographics, illustrations, reflective sections, and independent exercises into a systematic and accessible instructional format [29], [33]. In addition to supporting more visual and contextual material presentation, e-magazines can also be designed with self-regulated learning elements, such as learning objectives, reflective activities, self-monitoring, and self-evaluation. These elements are important in helping students manage their learning processes more independently, from planning and monitoring to evaluating their understanding of the material [32], [37], [44]. Therefore, the development of e-magazines in SKI learning is expected not only to increase students' interest and learning engagement, but also to strengthen their learning independence in accordance with the demands of twenty-first-century learning [3], [21].

Based on the needs analysis, the development of e-magazine-based digital learning media is considered necessary to support the improvement of students' self-regulated learning in Grade XI Islamic Cultural History (*Sejarah Kebudayaan Islam* or SKI). The quantitative findings indicate that students' learning independence remains in the moderate category, with achievement scores of 67.90% for metacognition, 66.20% for motivation, and 65.65% for learning behavior. These results suggest that students already possess basic abilities to plan and understand their learning processes; however, these abilities have not yet been consistently actualized in independent learning practices. The relatively lower scores in motivation and behavior indicate that students still require support in maintaining learning motivation, managing time, conducting self-evaluation, and reducing dependence on teacher guidance. This condition is consistent with the concept of self-regulated learning, which emphasizes students' ability to actively plan, monitor, control, and evaluate their own learning processes [30], [32], [37], [44].

The low level of student engagement in learning is also reflected in their limited initiative to ask questions, lack of confidence in expressing opinions, and tendency to remain dependent on teacher instructions. These findings indicate that SKI learning has not yet fully encouraged students to become active and reflective learners. In digital learning contexts, self-regulated learning is essential because it can strengthen motivation, engagement, and learning experiences through more personalized, flexible, and interactive learning environments [9].

Students with strong self-regulation skills tend to be better able to set learning goals, select appropriate learning strategies, sustain motivation, and complete tasks more independently [37], [44]. Therefore, the learning media to be developed should not merely function as a tool for delivering content, but also as a pedagogical instrument that stimulates learning planning, comprehension monitoring, reflection, and self-evaluation.

The results of observations and interviews further show that SKI learning in the classroom is still dominated by lecture-based instruction with limited media variation. The media currently used have not fully created interactive, engaging, and meaningful learning experiences. One-directional instruction may cause students to become passive, easily bored, and less involved in interpreting the values embedded in Islamic history. From the perspective of multimedia learning theory, the integration of text, images, audio, and interactive visuals can help improve students' attention, understanding, and engagement compared to learning that relies primarily on verbal explanation [22], [23], [25]. Thus, the limited variation of media in SKI learning strengthens the need for more contextual and interactive digital learning media.

The media needs analysis also shows an average score of 77.90%, which falls within the high category. This result indicates that both students and teachers require learning media that are more engaging, flexible, accessible, and supportive of independent learning. The high level of need across the aspects of SKI learning content, instructional media, and learning resources reflects a gap between students' learning needs and the media currently available. In digital learning, systematically designed media can help students set learning goals, manage time, monitor learning processes, and conduct self-evaluation more independently [34]. In addition, students with good self-regulation skills tend to be more active, adaptive, and capable of maintaining learning motivation throughout the learning process [42].

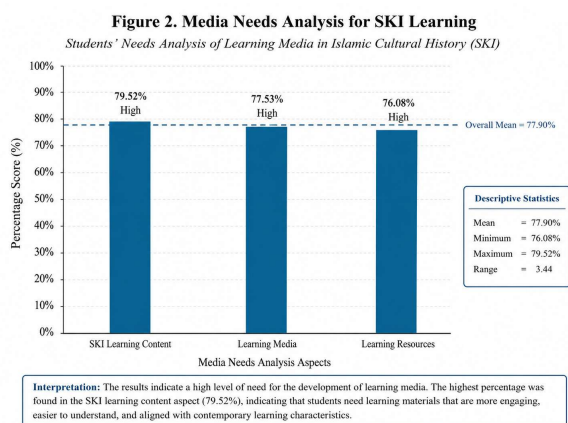
Therefore, the e-magazine is a relevant alternative learning medium to be developed for SKI learning. An e-magazine allows the integration of visual materials, short articles, infographics, illustrations, reflective activities, independent exercises, and self-evaluation within a systematic and flexible learning format [29], [33]. These characteristics enable students to learn according to their own pace and needs while encouraging active engagement and learning independence. The development of an SRL-based e-magazine does not merely represent an innovation in digital learning media, but also serves as a pedagogical strategy to strengthen students' motivation, participation, reflection, and self-regulation in SKI learning. Thus, the findings of this study affirm that SRL-based digital learning media innovation has strong potential to support SKI learning that is more active, engaging, contextual, and aligned with the demands of twenty-first-century education [3], [6], [28].

The findings of this study indicate that the need for an SRL-based e-magazine in Islamic Cultural History (*Sejarah Kebudayaan Islam* or SKI) learning is not merely a technical

need for digital media, but a pedagogical response to the gap between students' learning characteristics and the instructional media currently used in the classroom. The moderate level of students' self-regulated learning, particularly in the motivational and behavioral dimensions, suggests that students have not yet fully internalized the capacity to manage their own learning processes independently. This condition is reflected in their limited initiative to ask questions, dependence on teacher guidance, and insufficient ability to conduct self-evaluation and learning reflection. Such findings reinforce the theoretical view that self-regulated learning involves students' active capacity to plan, monitor, control, and evaluate their learning activities [30], [32], [37], [44]. Therefore, the development of learning media should not only focus on content delivery, but also on building a learning structure that guides students toward greater autonomy and reflective engagement.

From a pedagogical perspective, the dominance of lecture-based instruction and limited media variation in SKI learning may contribute to students' passive learning behavior. When learning is centered primarily on teacher explanation, students tend to receive information rather than actively construct meaning from historical events and Islamic values. This is particularly important in SKI learning, which should not only transmit historical knowledge, but also encourage students to derive *ibrah*, reflect on moral values, and relate Islamic historical narratives to contemporary life contexts [1], [14]. The limited use of interactive and reflective media may reduce students' opportunities to engage cognitively, emotionally, and behaviorally with the learning material. This aligns with research on student engagement, which emphasizes that meaningful learning requires active participation, interaction, and emotional involvement in the learning process [3], [8], [21].

Figure 2. Media needs analysis for SKI learning



Source : analyzed by the author

The media needs analysis, which reached an average score of 77.90% and falls within the high category, provides empirical evidence that students and teachers require instructional media that are more engaging, flexible, and supportive of independent learning. This high level of need indicates a mismatch between

existing learning resources and students' expectations for contemporary learning experiences. In digital learning environments, media should be designed not only to provide access to information, but also to support students in setting learning goals, managing learning time, monitoring their understanding, and conducting self-evaluation [34], [42]. Thus, the need for e-magazine development can be interpreted as a response to both instructional limitations and students' developmental needs in becoming more autonomous learners.

The e-magazine is relevant because it can integrate various pedagogical components into a single digital learning format, including short explanatory texts, visual materials, infographics, reflective questions, independent exercises, and self-evaluation activities. From the perspective of multimedia learning theory, the integration of text and visual elements can enhance students' attention and understanding when designed systematically and aligned with cognitive processing principles [22], [23], [25]. Moreover, e-magazines can provide flexible access to learning materials, allowing students to study according to their own pace and needs. This flexibility is essential for supporting self-regulated learning because students require opportunities to revisit materials, evaluate their comprehension, and reflect on their learning progress independently [29], [33], [37].

Furthermore, the development of an SRL-based e-magazine has strategic relevance for twenty-first-century learning. Contemporary education requires students to become active, adaptive, reflective, and independent learners who are capable of managing information and learning processes in digital environments [11], [28]. In this context, an e-magazine can function as both a learning resource and a pedagogical scaffold. It can guide students through structured learning objectives, provide reflective prompts, facilitate self-monitoring, and offer formative exercises that support independent learning. Therefore, the proposed e-magazine is not merely an innovation in instructional media, but a learning design intervention that aims to strengthen students' motivation, engagement, and self-regulation in SKI learning [6], [9], [15].

Overall, the analysis confirms that the development of an SRL-based e-magazine is empirically justified, theoretically grounded, and pedagogically relevant. The moderate level of students' SRL and the high level of media needs demonstrate that SKI learning requires a more interactive and student-centered learning medium. By integrating digital, visual, reflective, and self-evaluative components, the e-magazine has the potential to transform SKI learning into a more meaningful process that supports not only students' understanding of Islamic history, but also their ability to learn independently and reflectively. Thus, this study contributes to the discourse on digital learning media development by positioning the e-magazine as a strategic medium for strengthening self-regulated learning in Islamic Cultural History education.

4. Closing

This study concludes that the need for e-magazine-based learning media in Islamic Cultural History (Sejarah Kebudayaan Islam or SKI) at MA Annaim Ajisoko is empirically evident. The results of questionnaires, observations, and interviews indicate that the existing learning media are still relatively limited and have not fully supported students' self-regulated learning. Students' SRL level remains in the moderate category, particularly in the motivational and behavioral dimensions, which reflects their limited ability to sustain learning motivation, manage time, conduct self-evaluation, and learn independently without continuous teacher guidance.

The media needs analysis further shows a high level of demand for more engaging, flexible, and interactive learning media. The high percentage in the aspects of SKI learning materials, instructional media, and learning resources indicates that students require learning materials that are more visually attractive, easier to understand, and aligned with contemporary learning characteristics. Therefore, an SRL-based e-magazine is considered a relevant instructional innovation because it can integrate visual content, infographics, reflective activities, independent exercises, and self-evaluation features to support students' motivation, engagement, and learning independence.

Based on these findings, it is recommended that SKI teachers begin integrating digital learning media that are not only informative but also capable of stimulating students' active participation and independent learning. The e-magazine should be designed systematically by incorporating SRL components, such as learning objectives, reading guidance, self-monitoring activities, reflection questions, formative exercises, and self-evaluation sheets. Such features are expected to help students plan, monitor, and evaluate their own learning processes more effectively.

For future research, this needs analysis should be followed by the development, validation, and effectiveness testing of the SRL-based e-magazine. Further studies may involve expert validation, limited trials, large-scale implementation, and experimental testing to measure its impact on students' motivation, engagement, learning outcomes, and self-regulated learning. In addition, future development should consider accessibility, digital literacy, students' learning preferences, and the availability of school facilities so that the e-magazine can be implemented effectively and sustainably in SKI learning.

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References

- [1] Aslan and Suhari, *Pembelajaran Sejarah Kebudayaan Islam*, vol. 17. CV Razka Pustaka, 2018.
- [2] L. K. Barber, P. G. Bagnsby, M. J. Grawitch, and J. P. Buerck, "Facilitating self-regulated learning with technology: Evidence for student motivation and exam improvement," *Teaching of Psychology*, vol. 38, no. 4, pp. 303–308, 2011, doi: 10.1177/0098628311421337.
- [3] M. Bond, K. Buntins, S. Bedenlier, O. Zawacki-Richter, and M. Kerres, "Mapping research in student engagement and educational technology in higher education: A systematic evidence map," *International Journal of Educational Technology in Higher Education*, vol. 17, no. 2, pp. 1–30, 2020, doi: 10.1186/s41239-019-0176-8.
- [4] J. Broadbent and W. L. Poon, "Self-regulated learning strategies and academic achievement in online higher education learning environments: A systematic review," *The Internet and Higher Education*, vol. 27, pp. 1–13, 2015, doi: 10.1016/j.iheduc.2015.04.007.
- [5] J. W. Creswell, *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th ed. Thousand Oaks, CA, USA: SAGE Publications, 2018.
- [6] N. Dabbagh and A. Kitsantas, "Personal learning environments, social media, and self-regulated learning: A natural formula for connecting formal and informal learning," *The Internet and Higher Education*, vol. 15, no. 1, pp. 3–8, 2012, doi: 10.1016/j.iheduc.2011.06.002.
- [7] M. D. Dixon, "Measuring student engagement in the online course: The Online Student Engagement Scale (OSE)," *Online Learning*, vol. 19, no. 4, pp. 143–157, 2015, doi: 10.24059/olj.v19i4.561.
- [8] J. A. Fredricks, P. C. Blumenfeld, and A. H. Paris, "School engagement: Potential of the concept, state of the evidence," *Review of Educational Research*, vol. 74, no. 1, pp. 59–109, 2004, doi: 10.3102/00346543074001059.
- [9] Y. Gambo and M. Zeeshan, "Evaluating students' experiences in self-regulated smart learning environment," *Education and Information Technologies*, vol. 28, pp. 547–

- 580, 2023, doi: 10.1007/s10639-022-11126-0.
- [10] J. A. Greene and R. Azevedo, "A theoretical review of Winne and Hadwin's model of self-regulated learning: New perspectives and directions," *Review of Educational Research*, vol. 77, no. 3, pp. 334–372, 2007, doi: 10.3102/003465430303953.
- [11] P. Griffin, B. McGaw, and E. Care, Eds., *Assessment and Teaching of 21st Century Skills*. Dordrecht, Netherlands: Springer, 2012.
- [12] R. S. Jansen, A. van Leeuwen, J. Janssen, L. Kester, and M. Kalz, "Validation of the self-regulated online learning questionnaire," *Journal of Computing in Higher Education*, vol. 29, pp. 6–27, 2017, doi: 10.1007/s12528-016-9125-x.
- [13] R. S. Jansen, A. van Leeuwen, J. Janssen, R. Conijn, and L. Kester, "Supporting learners' self-regulated learning in Massive Open Online Courses," *Computers & Education*, vol. 146, 2020, Art. no. 103771, doi: 10.1016/j.compedu.2019.103771.
- [14] Kementerian Agama Republik Indonesia, *Modul Mata Pelajaran Sejarah Kebudayaan Islam*. Jakarta, Indonesia: Direktorat Jenderal Pendidikan Islam Kementerian Agama Republik Indonesia, 2023.
- [15] L. von Keyserlingk, J. Schwerter, and O. Kunina-Habenicht, "Motivation and self-regulated learning as predictors of learning resource use in learning management systems in higher education," *Educational Psychology*, vol. 46, no. 3, pp. 437–457, 2026, doi: 10.1080/01443410.2025.2564891.
- [16] R. F. Kizilcec, M. Pérez-Sanagustín, and J. J. Maldonado, "Self-regulated learning strategies predict learner behavior and goal attainment in Massive Open Online Courses," *Computers & Education*, vol. 104, pp. 18–33, 2017, doi: 10.1016/j.compedu.2016.10.001.
- [17] M. M. Kloppers, C. Bekker, and S. Rothmann, "The happy learner: Effects of academic boredom, burnout, and engagement," *Frontiers in Psychology*, vol. 14, pp. 1–14, 2023, doi: 10.3389/fpsyg.2022.974486.
- [18] A. Kristanto, *Media Pembelajaran*. Surabaya, Indonesia: Bintang Surabaya, 2016.
- [19] A. Littlejohn, N. Hood, C. Milligan, and P. Mustain, "Learning in MOOCs: Motivations and self-regulated learning in MOOCs," *The Internet and Higher Education*, vol. 29, pp. 40–48, 2016, doi: 10.1016/j.iheduc.2015.12.003.
- [20] B. Liu, J. Liu, and Q. Yang, "A survey on high school students' online self-regulated learning skills: A case of three high schools in Y City, East China," *International Journal of Web-Based Learning and Teaching Technologies*, vol. 19, no. 1, pp. 1–15, 2024, doi: 10.4018/IJWLTT.347664.
- [21] Q. Lu and M. R. Rameli, "How academic self-efficacy influences online learning engagement: The mediating role of boredom," *International Journal of Interactive Mobile Technologies*, vol. 17, no. 24, pp. 115–135, 2023.
- [22] F. Martin and D. U. Bolliger, "Engagement matters: Student perceptions on the importance of engagement strategies in the online learning environment," *Online Learning*, vol. 22, no. 1, pp. 205–222, 2018, doi: 10.24059/olj.v22i1.1092.
- [23] R. E. Mayer, *Multimedia Learning*, 2nd ed. New York, NY, USA: Cambridge University Press, 2009.
- [24] R. E. Mayer and R. Moreno, "Nine ways to reduce cognitive load in multimedia learning," *Educational Psychologist*, vol. 38, no. 1, pp. 43–52, 2003, doi: 10.1207/S15326985EP3801_6.
- [25] D. Miguel-Revilla, M. Calle-Carracedo, and M. Sánchez-Agustí, "Fostering engagement and historical understanding with a digital learning environment in secondary education," *E-Learning and Digital Media*, vol. 18, no. 4, pp. 344–364, 2021, doi: 10.1177/2042753020957452.
- [26] R. Moreno and R. Mayer, "Interactive multimodal learning environments," *Educational Psychology Review*, vol. 19, pp. 309–326, 2007, doi: 10.1007/s10648-007-9047-2.
- [27] O. D. Ningsih, *Pengembangan E-Magazine Berbasis Android pada Mata Pelajaran SKI Materi Peran Umat Islam Pasca Kemerdekaan Kelas XI di MAN 4 Bojonegoro*. Bojonegoro, Indonesia: Universitas Nahdlatul Ulama Sunan Giri, 2024.
- [28] M. R. Nursalam, "Pengaruh media pembelajaran berbasis e-majalah sejarah dalam meningkatkan kemampuan literasi digital siswa kelas XI SMA Negeri 5 Pekanbaru," *Nusantara Hasana Journal*, vol. 4, no. 9, pp. 30–38, 2025.
- [29] OECD, *OECD Future of Education and Skills 2030: OECD Learning Compass 2030*. Paris, France: OECD, 2019.
- [30] R. Oktavian, R. Fauzan, and A. P. Putra, "Pengembangan bahan ajar history e-magazine berbasis Wakelet pada mata pelajaran sejarah materi Kesultanan Banten sebagai pusat maritim Nusantara kelas XI SMA Negeri 1 Petir," *Jurnal Ilmiah Mahasiswa Pendidikan Sejarah*, pp. 1046–1053, 2024.
- [31] E. Panadero, "A review of self-regulated learning: Six models and four directions for research," *Frontiers in Psychology*, vol. 8, 2017, Art. no. 422, doi: 10.3389/fpsyg.2017.00422.
- [32] R. Pekrun, T. Goetz, L. M. Daniels, R. H. Stupnisky, and R. P. Perry, "Boredom in achievement settings: Exploring control-value antecedents and performance outcomes of a neglected emotion," *Journal of Educational Psychology*, vol. 102, no. 3, pp. 531–549, 2010, doi: 10.1037/a0019243.
- [33] P. R. Pintrich, "A conceptual framework for assessing motivation and self-regulated learning in college students," *Educational Psychology Review*, vol. 16, no. 4, pp. 385–407, 2004, doi: 10.1007/s10648-004-0006-x.
- [34] A. Prastowo, *Panduan Kreatif Membuat Bahan Ajar Inovatif*. Yogyakarta, Indonesia: Diva Press, 2015.
- [35] H. B. Santoso, R. D. Riyanti, T. Prastati, F. A. T. H. S., A. Susanty, and M. Yang, "Learners' online self-regulated learning skills in Indonesia Open University: Implications for policies and practice," *Education Sciences*, 2022.
- [36] A. M. Sari and D. Hendriani, "Pengembangan majalah IPS sebagai media pembelajaran pada materi interaksi budaya masa Kerajaan Islam di SMPN 3 Kedungwaru Tulungagung," *Jurnal Pendidikan*, 2025.
- [37] R. F. Schmid, R. M. Bernard, E. Borokhovski, R. M. Tamim,

-
- P. C. Abrami, C. A. Wade, M. A. Surkes, and G. Lowerison, "The effects of technology use in postsecondary education: A meta-analysis of classroom applications," *Computers & Education*, vol. 72, pp. 271–291, 2014, doi: 10.1016/j.compedu.2013.11.002.
- [38] D. H. Schunk and B. J. Zimmerman, *Self-Regulation of Learning and Performance*. New York, NY, USA: Routledge, 2009, doi: 10.4324/9780203763353.
- [39] Sudaryono, *Pembelajaran Pendidikan Agama Islam dari Sekolah Dasar hingga Perguruan Tinggi*. Indonesia: PT Ganesha Kreasi Semesta, 2025.
- [40] Y. T. Sung, K. E. Chang, and T. C. Liu, "The effects of integrating mobile devices with teaching and learning on students' learning performance: A meta-analysis and research synthesis," *Computers & Education*, vol. 94, pp. 252–275, 2016, doi: 10.1016/j.compedu.2015.11.008.
- [41] V. M. C. Tze, L. M. Daniels, and R. M. Klassen, "Evaluating the relationship between boredom and academic outcomes: A meta-analysis," *Educational Psychology Review*, vol. 28, no. 1, pp. 119–144, 2016, doi: 10.1007/s10648-015-9301-y.
- [42] X. Wang, L. Hui, X. Jiang, and Y. Chen, "Online English learning engagement among digital natives: The mediating role of self-regulation," *Sustainability*, pp. 1–21, 2022.
- [43] Y. Wu and X. Kang, "The relationship between academic boredom and EFL achievement: Examining the mediating role of behavioral engagement," *Journal of Language Teaching*, vol. 3, no. 2, pp. 1–10, 2023.
- [44] B. J. Zimmerman, "Becoming a self-regulated learner: An overview," *Theory Into Practice*, vol. 41, no. 2, pp. 64–70, 2002, doi: 10.1207/S15430421TIP4102

