

Experiential Learning Model Based on Local Wisdom in Learning Islamic Cultural History

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ABSTRACT: *Islamic Cultural History (SKI) learning must include cognitive aspects and applications in everyday life. The experiential learning model offers experiences that help students develop thinking skills to find the right solution to problems in the field. This study examines how the local wisdom-based experiential learning model influences the improvement of metacognitive skills, learning motivation, and learning outcomes in the subject of Islamic Cultural History (SKI) in grade V students of State Madrasah Ibtidaiyah (MI), who previously used more memorisation-based and less contextual learning methods. This study uses a quantitative method with a pretest-posttest control group experimental design, analysing the relationship between experiential learning strategies based on local wisdom, metacognition, motivation, and learning outcomes of grade V SKI students using MANOVA multivariate analysis and SPSS-26.0, with data collected through tests, questionnaires, and observations on elementary school students in Tulungagung Regency. The results of the study show that (1) there is an effect of the Experiential Learning model on improving students' metacognitive skills, (2) there is an effect on students' learning motivation, and (3) there is an effect on improving students' learning outcomes in the Islamic Cultural History course. Theoretically, this study confirms that the experiential learning model effectively enhances metacognition for independent learning and critical thinking. At the same time, the results indicate that Madrasah Ibtidaiyah (MI) should adopt this model to improve student engagement and learning outcomes, with support from teachers and madrasah principals.*

Pembelajaran Sejarah Kebudayaan Islam (SKI) harus mencakup aspek kognitif dan aplikasinya dalam kehidupan sehari-hari. Model pembelajaran eksperiensial menawarkan pengalaman yang membantu siswa mengembangkan keterampilan berpikir untuk menemukan solusi yang tepat atas permasalahan di lapangan. Penelitian ini mengkaji bagaimana model pembelajaran eksperiensial berbasis kearifan lokal memengaruhi peningkatan keterampilan metakognitif, motivasi belajar, dan hasil belajar mata pelajaran Sejarah Budaya Islam (SKI) pada siswa kelas V Madrasah Dasar Negeri (MI) yang sebelumnya lebih banyak menggunakan metode pembelajaran berbasis hafalan dan kurang kontekstual. Penelitian ini menggunakan metode kuantitatif dengan desain eksperimen kelompok

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kontrol pretest-posttest, menganalisis hubungan antara strategi pembelajaran eksperiensial berbasis kearifan lokal, metakognisi, motivasi, dan hasil belajar siswa kelas V SKI menggunakan analisis multivariat MANOVA dan SPSS-26.0, dengan data dikumpulkan melalui tes, angket, dan observasi pada siswa sekolah dasar di Kabupaten Tulungagung. Hasil penelitian menunjukkan bahwa (1) terdapat pengaruh model pembelajaran eksperiensial terhadap peningkatan keterampilan metakognitif siswa, (2) terdapat pengaruh terhadap motivasi belajar siswa, dan (3) terdapat pengaruh terhadap peningkatan hasil belajar siswa pada mata kuliah Sejarah Kebudayaan Islam. Secara teoritis penelitian ini menegaskan bahwa model pembelajaran eksperiensial efektif meningkatkan metakognisi untuk belajar mandiri dan berpikir kritis. Sementara itu hasil penelitian menunjukkan bahwa Madrasah Ibtidaiyah (MI) sebaiknya mengadopsi model ini untuk meningkatkan keterlibatan siswa dan hasil belajar, dengan dukungan dari guru dan kepala madrasah.

Keywords: *Experiential Learning Model, History of Islamic Culture (SKI), Metacognitive Skills, Learning Motivation, Learning Outcomes*

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I. INTRODUCTION

Islamic Cultural History or *Sejarah Kebudayaan Islam* (SKI) focuses on factual knowledge or information regarding important events and incidents in a certain period through human interaction as subjects who know and experience these events (Suntiah, 2021). Therefore, historical science studies empirical experiences and events as its primary focus. At the elementary education level, SKI is vital to developing knowledge and understanding of Islamic education, solving various contemporary Islamic education problems, and having a positive attitude towards changes in the Islamic education system. SKI prepares students to understand past phenomena correctly and professionally and dynamically adapt old cultures to new cultures. Thus, SKI not only places events related to the development and journey of Islamic education in order but also reveals the social reality of Muslims to respond to events that occur in the 21st century (Yumiarty et al., 2021). The core competencies expected from SKI learning in *Madrasah Ibtidaiyah* are to equip students with the ability to record, collect, and analyse historical facts objectively and find the meaning of these historical events for improvement in the present and future. SKI learning aims to help students emulate the process of Islamic education from the time of the apostleship of Muhammad SAW until now in everyday life (Mu'min et al., 2023).

The low ability of students at State *Madrasah Ibtidaiyah* in Indonesia is caused by the learning process, especially in SKI subjects, which has not fully provided students with the opportunity to develop their metacognitive abilities (Sulastri et al., 2024; Triwahyuningtyas & Sesanti, 2023). Several previous studies have shown that teachers still need help implementing learning models of the nature of SKI. The majority of SKI learning still focuses on the transfer of knowledge as a product (facts, laws, or theories) and is carried out through a tedious memorisation process, so that aspects of meaning, attitude, and scientific methods are often neglected (Muthoharoh & Miftahuddin, 2021; Simbolon & Koeswanti, 2020). In addition, SKI learning carried out by teachers has yet

to be fully linked to real-life contexts, does not start with real or concrete problems, and tends to deviate from the nature of SKI learning and students' learning needs. SKI learning activities also focus on preparing students for tests or exams (Fauziana & Fazilla, 2022).

In line with previous findings, there are indications that in SKI learning, teachers still need a broad view to develop more meaningful history learning and enrich students' knowledge. Teachers must still create a learning model that encourages students to think critically, creatively, and participative and has good metacognition and motivation toward 21st-century learning. On the contrary, teachers tend to follow traditional patterns that impact low SKI learning outcomes (Zaini et al., 2023).

Efforts are needed to improve the quality of SKI learning to create effective, efficient, and exciting learning, especially at the elementary education level (MI). This improvement must emphasise students' ability to think historically and understand history, which is essential for developing chronological thinking competencies and having knowledge of the past. This knowledge can be used to understand and explain the process of development and change in society. The socio-cultural diversity of Islam in Indonesia to find and foster national identity amid world community life. Given that the scope of SKI includes understanding content, context, knowledge, and attitudes, the SKI learning process should develop metacognitive skills to support higher-order thinking skills (Higher Order Thinking Skills) that are of international standard and by 21st-century learning competencies (Handoko et al., 2023).

The SKI learning paradigm must direct education by its objectives so that at the macro level, it can form an Indonesian society that is democratic, religious, critical, quality, and resilient in facing global environmental challenges (Alice Y. Kolb & Kolb, 2009; Parno et al., 2021). To update SKI learning, a strategic policy is needed to change the old paradigm into a new one that focuses on the future, encourages progress, is democratic, decentralised, learner-centred, multicultural, and has a global perspective. The goal is to create a quality education paradigm in facing the challenges of global change so that a democratic, critical, and quality Indonesian society is formed (Mänty et al., 2020).

This is necessary to create a learning strategy that uses the information collected by students and produces a practical plan for presenting learning that develops students' metacognition and learning motivation. Teachers must combine learning theory and design knowledge with experience regarding students and learning objectives (Yee & Tasir, 2023). Metacognition is very important for students because it can improve their learning outcomes. Research in Turkey shows that students with metacognitive mindsets have better learning outcomes (Kesici et al., 2021).

One effective learning strategy is experiential learning. Previous research has found that experiential learning can make learning more active (Mattar, 2018). Experiential learning can improve learning outcomes, provide variety and increase student interest, foster and develop student character, and effectively support connections between teachers and students (Gibbs, 2023; Tanaka et al., 2016). This method also increases student questioning, average exam scores, and percentage of student learning completion (Maryani et al., 2022). Students can understand the concepts learned in new ways and new materials and apply the concepts to complete personal experiences, which requires students to be more active in the learning process (Alice Y. Kolb & Kolb, 2009).

Children become more active, critical, independent, and creative, able to find solutions or answers, and responsible for their metacognition (Naufal et al., 2021).

This is Taccasu's opinion, which defines metacognition as part of the planning, monitoring, and evaluating of the learning process and awareness and control of the learning process (Purnomo et al., 2017a). Therefore, students must be trained to develop metacognition and high-level thinking skills according to their potential (Smith et al., 2020).

Metacognitive abilities can be trained and integrated into SKI learning through experiential learning. This strategy allows students to explore facts, concepts, procedures, and historical principles and rules through meaningful learning activities to build critical thinking and creativity (Aizikovitsh-Udi & Cheng, 2015; Utami et al., 2018). Therefore, learning must allow students to manage and identify weaknesses in their metacognition, plan, follow developments, and monitor their learning process (Firth, 2024).

One of the obstacles teachers face is the need for more ability to develop creative and cognitive SKI learning and experience, establish special learning media for SKI lessons, and process learning resources oriented to student needs. Therefore, an experiential learning strategy with local wisdom is needed to improve students' metacognition and learning motivation in SKI lessons. Based on previous research, only a few have discussed the impact of learning models on student learning outcomes from a metacognitive perspective. This study aims to determine the relationship and differences in metacognitive abilities, motivation, and SKI learning outcomes between students taught using local wisdom-based experiential learning methods and expository methods in grade V of *Madrasah Ibtidaiyah* at the elementary education level. Experiential learning based on local wisdom that is oriented towards improving students' metacognition and learning motivation will allow students to develop their way of thinking and choose the right strategy for solving problems (Duratun & Maryani, 2023; Kesici et al., 2021; Malik et al., 2024).

The hypotheses of this study are (1) H0: there is no effect of the Experiential Learning model on improving students' metacognitive skills; H1: there is an effect of the Experiential Learning model on improving students' metacognitive skills. (2) H0: there is no effect of the Experiential Learning model on students' learning motivation; H1: there is an effect of the Experiential Learning model on students' learning motivation. (3) H0: there is no influence of the Experiential Learning model on improving student learning outcomes in Islamic Cultural History; H1: there is an influence of the Experiential Learning model on improving student learning outcomes in Islamic Cultural History.

II. METHOD

This study used a quantitative method with an experimental design of the pretest-posttest control group type. Multivariate analysis was used in this study to evaluate several variables simultaneously, including the relationship between experiential learning strategies based on local wisdom, metacognition (planning, monitoring, and evaluation) at the learning stages, motivation, and learning outcomes of fifth-grade students in the SKI subject (Stockemer, 2019).

This study involved fifth-grade students of public Madrasah Ibtidaiyah in Tulungagung Regency as the population by selecting two public Madrasah Ibtidaiyah as clusters using purposive sampling techniques. After randomisation, Elementary School 1 (classes A and B) and Elementary School 4 (classes A and B) were selected with 108 students. (Creswell, 2014).

Researchers collect data using tests, questionnaires, and observations. The test instrument was developed and adapted from metacognition indicators from McGregor, Schraw, and Anderson & Krathwohl (2001) on metacognition ability questions and scales, which were adapted from metacognition indicators developed by Copper et al. (Krathwohl, 2002; Lukitasari et al., 2021; Suliani et al., 2024). There are five sub-indicators in the question instrument, namely (1) Awareness of the thinking process and the ability to describe it, (2) Development of thinking strategies, (3) Evaluative reflection on procedures, and (4) Relating conceptual understanding to experience. The metacognition scale consists of 3 components: (1) Planning, (2) Monitoring, and (3) Evaluation, each of which is divided into subcomponents. The testing of the learning motivation questionnaire uses the Gregory formula; the validity of the questions uses the biserial point correlation; the reliability of the questions uses the KR-20 formula; and the test discrimination power and the test difficulty level. Researchers tested the instrument's validity with correlation and measured its reliability using Cronbach's alpha formula.

The researcher analysed the data in this study using MANOVA with multivariate analysis method. Before testing the hypothesis, the researcher conducted prerequisite analysis tests, including data distribution normality test, variance homogeneity test, and correlation test between two dependent variables. These tests were performed using SPSS-26.0 for Windows (Wu et al., 2006; Zhang & Xiao, 2012).

The material taken is focused on the topic of the Prophet Muhammad's efforts in building the Medina community. The instruments used in this study include questionnaires for expert reviews, practitioner responses, and student trials.

III. RESULT AND DISCUSSION

Experiential Learning Model Based on Local Wisdom in Learning the History of Islamic Culture (SKI)

In the planning stage, the first step is to establish general learning objectives to increase students' awareness of the importance of studying Islam's fundamental teachings, values, and norms established by the Prophet Muhammad to advance Islamic culture and civilisation. Exceptional learning focuses on analysing and describing the efforts made by the Prophet Muhammad SAW in developing the Medina community.

A needs analysis reveals that students require increased learning motivation and enhanced metacognitive skills to improve learning outcomes. The primary teaching materials include the efforts of the Prophet Muhammad SAW in advancing the society of Medina, with student books on the history of Islamic culture serving as the primary source. Supporting materials include learning videos and PowerPoint slide presentations. The chosen teaching method is experiential learning. Learning media and tools include historical films, PowerPoint presentations, and student books.

During the implementation phase, the lesson begins with the teacher greeting the students, explaining the learning objectives, and conducting an apperception and a pretest. In the core activities, which encompass concrete experience, observative reflection, abstract conceptualisation, and active experimentation, the teacher engages students by asking about their experiences related to the history of Islamic culture and providing explanations based on their responses. Students observe by watching historical films about the Prophet Muhammad, conduct data mining by reading books, discuss the studied material, and engage in a Q&A session with the teacher. They then absorb new material derived from these activities. In the closing activities, the teacher concludes the material, provides reinforcement, and ends the lesson by saying goodbye.

In the evaluation phase, formative evaluation includes a posttest instrument and essay analysis, while summative evaluation is conducted through semester exams and assessed using a detailed rubric.

Results

The research data covering metacognition scores and students' learning motivation were analysed using descriptive and inferential statistics. The results of the descriptive statistical analysis are presented in Table 1.

Table 1. Descriptive Analysis Results

Variable	Class	Mean	Standard deviation	N
Metacognition	Experiment	84.26	6.617	54
	Control	66.24	7.790	54
	Total	75.25	11.561	108
Learning Motivation	Experiment	84.94	5.551	54
	Control	69.63	7.077	54
	Total	77.29	9.963	108
SKI Value	Experiment	87.54	5.229	54
	Control	72.72	6.496	54
	Total	80.13	9.478	108

Researchers conducted prerequisite tests to ensure all samples came from populations with normal distribution and uniform variance. The researchers present a summary of the normality test in Table 2, while the homogeneity test can be seen in Table 3.

Table 2. Normality Test Results

Variables	Class	Kolmogorov-Smirnov			Shapiro-Wilk		
		statistics	df	Sig.	Statistics	Df	Sig.
Metacognition	Experimental & Control	.125	108	.061	.955	108	.056
Learning Motivation	Experimental & Control	.098	108	.074	.963	108	.070
SKI Value	Experimental & Control	.078	108	.077	.966	108	.074

Researchers use the results of the Normality Test to determine whether the data follows a normal distribution. If the significance value (Sig.) is more significant than 0.05, the data is considered normally distributed; conversely, if the significance value is less than 0.05, the data is considered not normally distributed. Based on these results, the significance value (Sig.) for metacognition (Y1) is 0.061 (greater than 0.05), learning

motivation (Y2) is 0.074 (less than 0.05), and the SKI value (Y3) is 0.077 (greater than 0.05). This shows that variables Y1 and Y3 are typically distributed, while Y2 is not.

Table 3. Results of the Homogeneity of Variance Test

Variable	Value	F	df.1	df.2	Sig.
Motivation of metacognition and SKI learning outcomes	11.021	1.780	6	81408.000	0.099

Using the Box's M test table, researchers tested the MANOVA assumption regarding the homogeneity of the variance and covariance matrices. They accepted H0 if the variance-covariance matrix between groups was considered homogeneous, namely if the significance value was more significant than 0.05. The test results showed a Box's M value of 11.021 with a significance of 0.099. Since the significance value of 0.099 is more significant than 0.05, H0 is accepted, which means the variance/covariance matrix is considered homogeneous. Thus, researchers can continue the MANOVA analysis.

Table 4. Multivariate Analysis Result

Effect		Value	F	Hypothesis df	Error df	Sig.	Noncent. Parameter	Observed Power
intercept	Pillai's Trace	.997	12070.923 ^b	3.000	104.000	.000	36212.768	1.000
	Wilks' Lambda	.003	12070.923 ^b	3.000	104.000	.000	36212.768	1.000
	Hotelling's Trace	348.200	12070.923 ^b	3.000	104.000	.000	36212.768	1.000
	Roy's Largest Root	348.200	12070.923 ^b	3.000	104.000	.000	36212.768	1.000
Metode	Pillai's Trace	.753	105.449 ^b	3.000	104.000	.000	316.346	1.000
	Wilks' Lambda	.247	105.449 ^b	3.000	104.000	.000	316.346	1.000
	Hotelling's Trace	3.042	105.449 ^b	3.000	104.000	.000	316.346	1.000
	Roy's Largest Root	3.042	105.449 ^b	3.000	104.000	.000	316.346	1.000

Based on the table above, the Pillai trace intercept value shows a positive value of 0.997 with a significance of 0.000. The increase in this value indicates a significant difference in the average between data groups. The Wilk lambda value of 0.003 with a significance of 0.000 also shows a difference in the average between groups. In addition, the Hotelling trace value and Roy's largest root are each 348.200 with a significance of 0.000. These results indicate that metacognition, motivation, and SKI learning outcomes are interrelated and influenced by the experiential learning model.

Simultaneous testing compared the mean scores of metacognition, motivation, and learning outcomes of SKI between the experimental and control classes using four statistical tests: Pillai's trace, Wilk's lambda, Hotelling's trace, and Roy's largest root, which are based on eigenvalues. Pillai's trace value of 0.753 with a significance of 0.000 indicates a significant difference in the average between data groups. Wilk's lambda value of 0.247 with a significance of 0.000 also shows a difference in the average between groups. In addition, Hotelling's trace and Roy's largest root each obtained a value of 3.042 with a significance of 0.000. All four p-values obtained <0.05 indicate significant 95% confidence level results.

Table 5. Analysis Result of Among-Subjects Effect (SPSS-26.0 for Windows)

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power ^d
	Metacognition	8766.009 ^a	1	8766.009	167.839	.000	167.839	1.000

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Noncent. Parameter	Observed Power ^d
Corrected Model	learning motivation	6332.676 ^b	1	6332.676	156.566	.000	156.566	1.000
	SKI learning results	5925.926 ^c	1	5925.926	170.403	.000	170.403	1.000
Intercept	Metacognition	611556.750	1	611556.750	11709.212	.000	11709.212	1.000
	learning motivation	645114.898	1	645114.898	15949.472	.000	15949.472	1.000
	SKI learning results	693441.815	1	693441.815	19940.223	.000	19940.223	1.000
Metode	Metacognition	8766.009	1	8766.009	167.839	.000	167.839	1.000
	learning motivation	6332.676	1	6332.676	156.566	.000	156.566	1.000
	SKI learning results	5925.926	1	5925.926	170.403	.000	170.403	1.000
Error	Metacognition	5536.241	106	52.229				
	learning motivation	4287.426	106	40.447				
	SKI learning results	3686.259	106	34.776				
Total	Metacognition	625859.000	108					
	learning motivation	655735.000	108					
	SKI learning results	703054.000	108					
Corrected Total	Metacognition	14302.250	107					
	learning motivation	10620.102	107					
	SKI learning results	9612.185	107					

Information: df: difference; sig: significance; F: ratio of variants

Furthermore, the test of the between-subject effect shows that the relationship between learning methods and metacognition (Y1) produces an F value of 167.839 with a significance of 0.000, indicating a difference in metacognition due to differences in learning methods. The relationship between learning methods and learning motivation (Y2) gives an F value of 156.566 with a significance of 0.000, indicating that learning methods affect learning motivation. Finally, the relationship between learning methods and SKI learning outcomes (Y3) shows an F value of 170.403 with a significance of 0.000, indicating a difference in SKI learning outcomes caused by differences in learning methods.

Influence of The Experiential Learning Model Based on Local Wisdom to Improve Students' Metacognition Skills

First, the first hypothesis test results show a difference in metacognitive skills between students taught with the experiential learning model and the expository method. Based on the marginal means output estimation, the F value obtained is 170.403 with a probability of 0.00 (less than 0.05, significance level 5%), indicating that the average metacognitive skills of students using the experiential learning model are 84.94, while those using the expository method are 69.63. This means that applying the experiential

learning model is more effective in improving metacognitive skills than the expository method.

This statement aligns with Shahrill's opinion, emphasising that students can directly apply experiential learning models based on local wisdom to improve their metacognition. Metacognition in SKI learning is crucial so students can learn independently, think critically, and solve real-life problems (Jiang & Kleitman, 2015a, 2015b; A Y Kolb & Kolb, 2017; Shahrill et al., 2013). Consistent metacognitive strategies can help students design, monitor, and assess learning activities, potentially forming quality students. Students with good metacognition in SKI learning can improve the balance between attitudes, skills, and knowledge, thus producing graduates who are productive, creative, innovative, and ready to face global challenges.

This study's results align with studies showing that experiential learning models can improve students' metacognition. Research by Odo M shows that after implementing the Experiential Learning model, students become more active and responsive to the material taught (Odo, 2022). Hamilton's research also revealed significant differences in self-regulated learning, learning motivation, metacognitive regulation, and resource management between the experimental and control groups, indicating that the experiential learning model effectively improves students' self-regulated learning (Hamilton & Klebba, 2011). In addition, research by Helen L. Naug, Natalie J Colson, and Daniel Donner found that the experiential learning model is associated with increased student metacognition, which has a positive impact on student achievement in quiz assessments and increases student activity and engagement in the learning process (Naug et al., 2016).

The data presented aligns with various theories about the Experiential Learning model, which show that this model effectively creates an optimal learning experience. This model involves students in real or contextual experiences related to ideas and principles, so it effectively changes behaviour (Ng et al., 1997). A conducive learning atmosphere, a sense of joy when completing tasks, and different perspectives in understanding historical events can increase students' awareness of the need for change in the industrial era 4.0 towards 5.0. This contributes to improving student absorption and retention in the learning process.

In addition to increasing students' absorption and motivation to learn, the experiential learning model also plays a vital role in developing intercultural sensitivity and competence (Fuad et al., 2017). This model makes students more critical of the information and knowledge received, allowing them to absorb competencies different from those they already have. Ultimately, this encourages a positive and robust learning process in SKI learning (Purnomo et al., 2017b; Savicki, 2023).

From the data presented above, it can be concluded that the experiential learning model based on local wisdom in SKI learning has the following impacts: (1) improving students' metacognitive skills, enabling them to manage cognitive skills and identify weaknesses that can be improved with subsequent skills; (2) helping students become independent learners, develop an honest attitude, dare to admit mistakes and improve learning outcomes; (3) in terms of skills, students can appreciate and preserve cultural diversity, which has an impact on the readiness of the younger generation in facing global challenges and becoming a mouthpiece in understanding and acting appropriately towards the local advantages of their region (Abdullah et al., 2020). In addition, this model also transforms the cultural values of the Tulungagung Regency community in

SKI learning so that they are known, accepted, and can be internalised by students (Gülerce & Yapar, 2020).

Influence of The Experiential Learning Model Based on Local Wisdom to Improve Students' Motivation

The results of the second hypothesis test indicate a difference in the motivation of SKI learning outcomes between students taught with the experiential learning model and the expository method. Based on the estimation of marginal means output, the F value = 156.566 and the probability of $0.00 < 0.05$ (significance level of 5%) indicate that the average learning motivation of students taught with the experiential learning model is 84.94. In contrast, the number of students taught using the expository method is 69.63. This means that applying the experiential learning model in the experimental class can increase learning motivation compared to the control class using the expository method.

Learning motivation data were obtained from the initial and final questionnaires in each experimental class, and the data results were processed using SPSS 26 for Windows. The test results showed a difference in SKI learning motivation between students taught with the experiential learning model and the expository method at a significant level of 0.00. This aligns with Sung & Huang 's statement that if students have high involvement in a lesson, it will impact their interest in the lesson (Sung & Huang, 2024). The experiential learning model is fun for students because it simultaneously makes them relax and, of course, increases students' understanding of concepts.

These results align with several studies that reveal that the experiential learning model can increase students' learning motivation compared to the application of conventional learning models (Astuti et al., 2022). In digital simulation courses, this model also increases students' learning motivation (Edu et al., 2021). Balgis Swaneda Fortunela's research found that in science learning, the experiential learning model increases students' motivation and learning outcomes (Fortunela et al., 2022) and is also better than the direct instruction method. The experiential learning model is superior in influencing students' learning motivation (Aryani & Suarjana, 2022).

Based on the previous explanation, the experiential learning model influences learning motivation, a form of desire to move, express, and focus individual characteristics in learning. Motivation in the learning process is vital (Naumoska et al., 2022). The success of the learning process can be measured by how much students absorb the information provided by the motivation variable. Motivated students will be able to utilise the entire process of learning the material, especially the cognitive process so that they can absorb the information provided.

Influence of The Experiential Learning Model Based on Local Wisdom to Improve Students' Learning Outcomes

The results of the third hypothesis test show a difference in SKI learning outcomes between students taught with the experiential learning model and the expository method. Based on the marginal mean output estimate, the F value = 170.403 and the probability value of $0.00 < 0.05$ (significance level 5%) indicate that the average learning outcomes of students in the SKI subject taught with the experiential learning model are 87.54, while those trained with the expository method are 72.72. Applying the experiential learning model is more effective in improving SKI learning outcomes than the expository method. These results align with studies such as those conducted by Masyitha, which revealed that the experiential learning model can improve student

learning outcomes in digital simulation courses (Brifkani, 2023). Experiential learning has also been found to enhance metacognitive skills and student learning outcomes, as Khoir confirmed that students' metacognitive abilities increase with experiential learning (Khoir et al., 2022). Prihatin stated a strong relationship exists between metacognitive skills, critical thinking, and student knowledge (Prihatin et al., 2022). This also improves the learning outcomes of grade V science (Lin et al., 2016), as well as improving speaking skills by 73% and learning outcomes (Purwati et al., 2020), and student learning achievement increases by 95% in mathematics learning (Widyaningsih & Dibia, 2020).

Other studies have shown that applying experiential learning methods can also improve critical thinking skills, as found in Jacob's study. Data analysis showed that the N Gain Score test results were at an average of 0.67 with a moderate category (Jacob, 2012). The data in this study were analysed by comparing the average critical thinking ability scores between the control and experimental classes. It was concluded that the experiential learning model can improve students' critical thinking skills. This study is expected to provide information on the application and benefits of the experiential learning model in Calculus learning and make learning more meaningful for students (Abdullah et al., 2020).

Based on the description above, applying this learning model can be understood as constructing knowledge through the transformation of experience. Learning from experience involves the relationship between action and thought. The more active a person is, the better their learning outcomes because in the learning process, learners actively think about what they have learned and focus their attention on how to apply what they have learned to real situations through four stages of the Experiential Learning Model, namely: (1) Concrete experience, (2) Reflective observation, (3) Abstract conceptualisation, and (4) Active experimentation. Thus, the Experiential learning model can (1) increase awareness of self-confidence; (2) improve the ability to communicate, make plans, and solve problems; (3) grow and improve the ability to face unpleasant situations; (4) grow and improve trust between group members; (5) foster a spirit of cooperation and the ability to compromise; and (6) increase commitment and responsibility.

IV. CONCLUSION

The experiential learning model is more effective in improving students' metacognitive skills, learning motivation, and SKI learning outcomes compared to the expository method. With an average value of metacognitive skills of 84.94 and learning motivation of 84.94, students taught with the experiential model showed better results than the average value of 69.63 for the expository method. This model can significantly improve students' metacognitive skills, learning motivation, and learning outcomes.

Further research is suggested to involve more variables and learning contexts to test the effectiveness of the experiential learning model. Longitudinal research is needed to see the long-term impact of this model on metacognitive skills, learning motivation, and student learning outcomes. In addition, exploration of the application of the experiential learning model in various subjects and other levels of education is needed to expand the generalisation of the findings of this study.

V. REFERENCES

- [1] Abdullah, A. A., Shanti, W. N., & Sholihah, D. A. (2020). Critical thinking ability through experiential learning in the calculus class. *Journal of Physics: Conference Series*, 1613(1), 012002. <https://doi.org/10.1088/1742-6596/1613/1/012002>
- [2] Aizikovitsh-Udi, E., & Cheng, D. (2015). Developing Critical Thinking Skills from Dispositions to Abilities: Mathematics Education from Early Childhood to High School. *Creative Education*, 06(04), 455–462. <https://doi.org/10.4236/ce.2015.64045>
- [3] Aryani, N. M. R., & Suarjana, I. M. (2022). Students' Motivation for Learning Mathematics during the Covid-19 Pandemic. *International Journal of Elementary Education*, 6(1), 38–47. <https://doi.org/10.23887/ijee.v5i4.39982>
- [4] Astuti, S., Rukmana, D., Pramudiani, P., & Zulherman, Z. (2022). The role of teachers and parents to improve children's motivational learning in pandemic situation. *International Journal of Evaluation and Research in Education (IJERE)*, 11(3), 1162. <https://doi.org/10.11591/ijere.v11i3.22583>
- [5] Brifkani, I. (2023). Islamic Pedagogy for Guidance and Transformation: Toward an Islamic Experiential Learning Model. *Journal of Education in Muslim Societies*, 5(1), 106–112. <https://doi.org/10.2979/jems.5.1.07>
- [6] Creswell, J. W. (2014). *Research design qualitative quantitative and mixed methods approaches*. Routledge.
- [7] Duratun, A. D., & Maryani, I. (2023). The Influence of Self-Efficacy on Metacognition Skills of High Grade Students. *International Journal of Elementary Education*, 7(3), 403–409. <https://doi.org/10.23887/ijee.v7i3.62125>
- [8] Edu, A. L., Jaya, P. R. P., & Ni, L. (2021). The Phenomenon of Learning Motivation of Elementary School Students. *International Journal of Elementary Education*, 5(2), 337. <https://doi.org/10.23887/ijee.v5i2.33934>
- [9] Fauziana, F., & Fazilla, S. (2022). The Impact of Metacognition on Elementary School Students' Problem-Solving Skills in Science Learning. *Jurnal Ilmiah Sekolah Dasar*, 6(2), 278–286. <https://doi.org/10.23887/jisd.v6i2.44889>
- [10] Firth, J. (2024). Metacognition and Study Skills: A Guide for Teachers. In *International Education Studies* (Vol. 5, Issue 4). Routledge. <https://doi.org/10.4324/9781003386971>
- [11] Fortunela, B. S. F., Subekti, H., & Sabtiawan, W. B. (2022). Application of experiential learning model to increase students motivation and learning outcomes. *Jurnal Pijar Mipa*, 17(4), 430–436. <https://doi.org/10.29303/jpm.v17i4.3601>
- [12] Fuad, N. M., Zubaidah, S., Mahanal, S., & Suarsini, E. (2017). Improving Junior High Schools' Critical Thinking Skills Based on Test Three Different Models of Learning. *International Journal of Instruction*, 10(01), 101–116. <https://doi.org/10.12973/iji.2017.1017a>
- [13] Gibbs, K. (2023). Voices in practice: challenges to implementing differentiated instruction by teachers and school leaders in an Australian mainstream secondary school. *The Australian Educational Researcher*, 50(4), 1217–1232. <https://doi.org/10.1007/s13384-022-00551-2>

- [14] Gülerce, H., & Yapar, O. E. (2020). The Role of Values Education in Countering Violence. *Journal of Islamic Thought and Civilization*, 10(2), 37–54. <https://doi.org/10.32350/jitc.102.03>
- [15] Hamilton, J. G., & Klebba, J. M. (2011). Experiential Learning: A Course Design Process For Critical Thinking. *American Journal of Business Education (AJBE)*, 4(12), 1–12. <https://doi.org/10.19030/ajbe.v4i12.6608>
- [16] Handoko, S. T., Mardiaty, Y., Ismail, R., & Imawan, O. R. (2023). Employing higher order thinking skills-based instruction in history course: A history high school teacher's perspective. *The First International Conference on Neuroscience and Learning Technology (Iconsatin 2021)*, 070004. <https://doi.org/10.1063/5.0127631>
- [17] Jacob, S. M. (2012). Mathematical achievement and critical thinking skills in asynchronous discussion forums. *Procedia - Social and Behavioral Sciences*, 31, 800–804. <https://doi.org/10.1016/j.sbspro.2011.12.144>
- [18] Jiang, Y., & Kleitman, S. (2015a). Metacognition and motivation: Links between confidence, self-protection and self-enhancement. *Learning and Individual Differences*, 37, 222–230. <https://doi.org/10.1016/j.lindif.2014.11.025>
- [19] Jiang, Y., & Kleitman, S. (2015b). Metacognition and motivation: Links between confidence, self-protection and self-enhancement. *Learning and Individual Differences*, 37, 222–230. <https://doi.org/10.1016/j.lindif.2014.11.025>
- [20] Kesici, A. E., Güvercin, D., & Küçükakça, H. (2021). Metacognition researches in Turkey, Japan and Singapore. *International Journal of Evaluation and Research in Education (IJERE)*, 10(2), 535. <https://doi.org/10.11591/ijere.v10i2.20790>
- [21] Khoir, E. F., Suprpto, N., Setyarsih, W., & Deta, U. A. (2022). LITERATURE REVIEW STUDENT'S METACOGNITIVE ABILITY: BIBLIOMETRIC ANALYSIS. *Journal of Teaching and Learning Physics*, 7(1), 11–22. <https://doi.org/10.15575/jotalp.v7i1.13698>
- [22] Kolb, A Y, & Kolb, D. A. (2017). Experiential Learning Theory as a Guide for Experiential Educators in Higher Education. *ELTHE: A Journal for Engaged Educators*, 1(1), 7–45.
- [23] Kolb, Alice Y., & Kolb, D. A. (2009). Experiential Learning Theory: A Dynamic, Holistic Approach to Management Learning, Education and Development. In *The SAGE Handbook of Management Learning, Education and Development* (pp. 42–68). SAGE Publications Ltd. <https://doi.org/10.4135/9780857021038.n3>
- [24] Krathwohl, D. R. (2002). A Revision of Bloom's Taxonomy: An Overview. *Theory Into Practice*, 41(4), 212–218. https://doi.org/10.1207/s15430421tip4104_2
- [25] Lin, J.-W., Yen, M.-H., Liang, J., Chiu, M.-H., & Guo, C.-J. (2016). Examining the Factors That Influence Students' Science Learning Processes and Their Learning Outcomes: 30 Years of Conceptual Change Research. *EURASIA Journal of Mathematics, Science and Technology Education*, 12(9). <https://doi.org/10.12973/eurasia.2016.000600a>
- [26] Lukitasari, M., Hasan, R., Sukri, A., & Handhika, J. (2021). Developing student's metacognitive ability in science through project-based learning with e-portfolio. *International Journal of Evaluation and Research in Education (IJERE)*, 10(3), 948. <https://doi.org/10.11591/ijere.v10i3.21370>

- [27] Malik, U., Abdyhalykova, Z., & Malikov, A. (2024). Blended learning in the development of university students' metacognition. *International Journal of Evaluation and Research in Education (IJERE)*, 13(4), 2461. <https://doi.org/10.11591/ijere.v13i4.28233>
- [28] Mänty, K., Järvenoja, H., & Törmänen, T. (2020). Socio-emotional interaction in collaborative learning: Combining individual emotional experiences and group-level emotion regulation. *International Journal of Educational Research*, 102, 101589. <https://doi.org/10.1016/j.ijer.2020.101589>
- [29] Maryani, I., Prasetyo, Z. K., Wilujeng, I., & Purwanti, S. (2022). Promoting higher-order thinking skills during online learning: The integration of metacognition in science for higher education. *International Journal of Evaluation and Research in Education (IJERE)*, 11(4), 1980. <https://doi.org/10.11591/ijere.v11i4.23129>
- [30] Mattar, J. (2018). Constructivism and connectivism in education technology: Active, situated, authentic, experiential, and anchored learning. *RIED. Revista Iberoamericana de Educación a Distancia*, 21(2), 201. <https://doi.org/10.5944/ried.21.2.20055>
- [31] Mu'min, U. A., Khutomi, B. M., & Azhari, H. (2023). The Influence of Student Inquiry and Curiosity Level on The Learning Outcomes of The Cognitive Aspects of History of Islamic Culture Subject. *Ta'dib: Jurnal Pendidikan Islam*, 28(1), 96–105. <https://doi.org/10.19109/td.v28i1.17919>
- [32] Muthoharoh, L., & Miftahuddin, M. (2021). Character Education Model In Indonesian History Learning At Islamic Boarding School. *Proceedings of the 1st International Seminar on Teacher Training and Education, ISTED 2021, 17-18 July 2021, Purwokerto, Indonesia*. <https://doi.org/10.4108/eai.17-7-2021.2312386>
- [33] Naufal, M. A., Abdullah, A. H., Osman, S., Abu, M. S., Ihsan, H., & Rondiyah, R. (2021). Reviewing the Van Hiele model and the application of metacognition on geometric thinking. *International Journal of Evaluation and Research in Education (IJERE)*, 10(2), 597. <https://doi.org/10.11591/ijere.v10i2.21185>
- [34] Naug, H. L., Colson, N. J., & Donner, D. (2016). Experiential Learning, Spatial Visualization and Metacognition: An Exercise with the “Blank Page” Technique for Learning Anatomy. *Health Professions Education*, 2(1), 51–57. <https://doi.org/10.1016/j.hpe.2016.01.001>
- [35] Naumoska, A., Rusevska, K., Blazhevskaa, A., & Stojanovska, M. (2022). Nearpod as a tool for increasing students' motivation for learning chemistry. *International Journal of Education and Learning*, 4(1), 89–99. <https://doi.org/10.31763/ijelev.v4i1.616>
- [36] Ng, John, & TAN, G. Y. W. (1997). *Uses and Abuses of Experiential Learning: Perspectives from a Practitioner and an Academic*.
- [37] Odo, M. (2022). Creating Interactive Online Learning Experiences among Secondary School Students in Lagos State, Nigeria. *Journal of Vocational Education Studies*, 5(2), 276–287. <https://doi.org/10.12928/joves.v5i2.6528>
- [38] Parno, Estianinur, & Latifah, E. (2021). The increase of problem solving skills of students through STEM integrated experiential learning with formative assessment. *The 2nd Science and Mathematics International Conference (Smic 2020)*:

Transforming Research and Education of Science and Mathematics in The Digital Age, 030021. <https://doi.org/10.1063/5.0041681>

- [39] Prihatin, A. I., Komala, R., Ristanto, R. H., & Saifuddin, M. F. (2022). Relationship of metacognitive skills, critical thinking, and students' knowledge of ecosystem concepts. *JURNAL BIOEDUKATIKA*, 10(2), 86–96. <https://doi.org/10.26555/bioedukatika.v10i2.23397>
- [40] Purnomo, D., Nusantara, T., Subanji, S., & Rahardjo, S. (2017a). The Characteristic of the Process of Students' Metacognition in Solving Calculus Problems. *International Education Studies*, 10(5), 13. <https://doi.org/10.5539/ies.v10n5p13>
- [41] Purnomo, D., Nusantara, T., Subanji, S., & Rahardjo, S. (2017b). The Characteristic of the Process of Students' Metacognition in Solving Calculus Problems. *International Education Studies*, 10(5), 13. <https://doi.org/10.5539/ies.v10n5p13>
- [42] Purwati, G. A. M., Sudana, D. N., & Arini, N. W. (2020). Mathematics Learning with Guided Inquiry Model Open-Oriented Problem Solving Improves Student Learning Outcomes. *International Journal of Elementary Education*, 4(4), 454–463. <https://doi.org/10.23887/ijee.v4i4.27198>
- [43] Savicki, V. (2023). Experiential and Affective Education for International Educators. In *Developing Intercultural Competence and Transformation* (pp. 74–91). Routledge. <https://doi.org/10.4324/9781003444169-6>
- [44] Shahrill, M., Mahalle, S., Matzin, R., Sheikh Hamid, M. H., & Mundia, L. (2013). A Comparison of Learning Styles and Study Strategies Used by Low and High Math Achieving Brunei Secondary School Students: Implications for Teaching. *International Education Studies*, 6(10), 39–46. <https://doi.org/10.5539/ies.v6n10p39>
- [45] Simbolon, R., & Koeswanti, H. D. (2020). Comparison Of Pbl (Project Based Learning) Models With Pbl (Problem Based Learning) Models To Determine Student Learning Outcomes And Motivation. *International Journal of Elementary Education*, 4(4), 519–529. <https://doi.org/10.23887/ijee.v4i4.30087>
- [46] Smith, A. K., Black, S., & Hooper, L. M. (2020). Metacognitive Knowledge, Skills, and Awareness: A Possible Solution to Enhancing Academic Achievement in African American Adolescents. *Urban Education*, 55(4), 625–639. <https://doi.org/10.1177/0042085917714511>
- [47] Stockemer, D. (2019). *Quantitative Methods for the Social Sciences* (G. R. Hancock, G. R. Hancock, R. O. Mueller, L. M. Stapleton, & R. O. Mueller (eds.)). Springer International Publishing. <https://doi.org/10.1007/978-3-319-99118-4>
- [48] Sulastri, Nur Nasution, W., & Rakhmawati, F. (2024). Interactive Digital Storybook: ICT-Based Innovation in Learning the History of Islamic Culture. *JIE (Journal of Islamic Education)*, 9(1), 339–358. <https://doi.org/10.52615/jie.v9i1.401>
- [49] Suliani, M., Juniati, D., & Lukito, A. (2024). The influence of student's mathematical beliefs on metacognitive skills in solving mathematical problem. *International Journal of Evaluation and Research in Education (IJERE)*, 13(3), 1481. <https://doi.org/10.11591/ijere.v13i3.27117>
- [50] Sung, J. S., & Huang, W.-H. D. (2024). Motivational design for inclusive digital learning: Women college engineering students' motivation for online STEM learning. *Contemporary Educational Technology*, 16(1), ep489.

<https://doi.org/10.30935/cedtech/14047>

- [51]Suntiah, R. (2021). Students' Critical Thinking Skills in The Reflective Class of Islamic Cultural History. *Jurnal Pendidikan Islam*, 7(2), 195–204.
<https://doi.org/10.15575/jpi.v7i2.15060>
- [52]Tanaka, K., Dam, H. C., Kobayashi, S., Hashimoto, T., & Ikeda, M. (2016). Learning How to Learn through Experiential Learning Promoting Metacognitive Skills to Improve Knowledge Co-creation Ability. *Procedia Computer Science*, 99, 146–156.
<https://doi.org/10.1016/j.procs.2016.09.107>
- [53]Triwahyuningtyas, D., & Sesanti, N. R. (2023). Metacognition analysis of five grade students in elementary school on numbers. *International Journal of Evaluation and Research in Education (IJERE)*, 12(1), 327.
<https://doi.org/10.11591/ijere.v12i1.23233>
- [54]Utami, B., Saputro, S., Ashadi, A., Masykuri, M., Probosari, R. M., & Sutanto, A. (2018). Students' critical thinking skills profile: constructing best strategy in teaching chemistry. *IJPTE: International Journal of Pedagogy and Teacher Education*, 2, 63. <https://doi.org/10.20961/ijpte.v2i0.19768>
- [55]Widyaningsih, I. A. T., & Dibia, I. K. (2020). Instrument Appropriateness On The Assessment Of Fourth Grade Science Learning Outcomes In Elementary Schools. *International Journal of Elementary Education*, 4(4), 472–480.
<https://doi.org/10.23887/ijee.v4i4.27209>
- [56]Wu, Hulin, & Zhang., J.-T. (2006). *Nonparametric regression methods for longitudinal data analysis: mixed-effects modeling approaches*. John Wiley & Sons. www.wiley.com.
- [57]Yee, K. F., & Tasir, Z. (2023). The effects of interactive whiteboard with activity theory towards year five students' motivation and performance in learning science. *International Journal of Education and Learning*, 5(1), 1–13.
<https://doi.org/10.31763/ijelev.v5i1.817>
- [58]Yumiarty, Y., Komalasari, B., & Kristiawan, M. (2021). The Urgency of Learning the History of Islamic Culture: Digital Literation Based. *AJIS: Academic Journal of Islamic Studies*, 6(1), 49. <https://doi.org/10.29240/ajis.v6i1.2328>
- [59]Zaini, M., Purwowododo, A., & Nuryanti. (2023). Hybrid-Generative Learning: Learning Outcomes, Creative Thinking Skills, Learning Interest in Islamic Religious Education Subjects in Junior High School. *Jurnal Pendidikan Agama Islam*, 20(2), 262–278. <https://doi.org/10.14421/jpai.v20i2.7846>
- [60]Zhang, J.-T., & Xiao, S. (2012). A note on the modified two-way MANOVA tests. *Statistics & Probability Letters*, 82(3), 519–527.
<https://doi.org/10.1016/j.spl.2011.12.005>