Improving Creative Thinking Skills Through Learning Cycle 5E Lessons of Akidah Akhlak at SMP Muhammadiyah 1 Surabaya

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Abstract

Research Objective– This study aims to describe the creative thinking skills of students at SMP Muhammadiyah 1 Surabaya, explain the 5E Learning Cycle approach in teaching Aqidah Akhlak, and analyze the improvement of creative thinking skills through this approach in Aqidah Akhlak lessons.

Methodology– The research employs a qualitative descriptive method. Data were collected through interviews, field observations, and documentation, then analyzed using data reduction, data display, and conclusion-drawing techniques.

Findings– The study found that students' creative thinking skills were initially low before implementing the 5E Learning Cycle approach. After applying this approach, which consists of five stages—engagement, exploration, explanation, elaboration, and evaluation—there was a significant improvement in students' creative thinking skills, including fluency, flexibility, originality, and detail in Aqidah Akhlak lessons.

Research Implications/Limitations– This study highlights the importance of implementing the 5E Learning Cycle approach to enhance students' creative thinking skills. However, the study is limited to the context of SMP Muhammadiyah 1 Surabaya and requires further validation in different educational settings for broader generalization.

Originality/Value– This research provides a novel contribution by demonstrating that the 5E Learning Cycle approach can be an effective method for developing students' creative thinking skills in Aqidah Akhlak lessons. It is highly relevant to support 21st-century educational needs, which emphasize higher-order thinking skills.

INTRODUCTION

Global competition in the digital era requires more than just mastery of knowledge, but also mastery of various skills including creative thinking skills, problem solving, communication, collaboration, creativity, literacy, and awareness of global issues.[1] Creative thinking is one of the 4C skills and is known as a 21st century skill.[2] Creative thinking is a thinking process of developing or finding (original), aesthetic, constructive ideas or results related to views, concepts, where the emphasis is on aspects of intuitive and rational thinking, especially in using information and materials to bring up or explain from the perspective of original thinkers.[3] The urgency of the ability to think creatively is stated in PP no. 19 of 2005 concerning National Education Standards Article 19 paragraph 1 that the learning process in educational units is carried out in an interactive, inspiring, fun, challenging and motivating way for students to participate actively, as well as providing sufficient space for initiative, "creativity" and independence in accordance with talents, interests and physical and psychological development of students.[4]

Students' ability to think creatively does not just happen, but there must be guidance from the teacher so that students can have the ability to think flexibly, be original and detailed. Teachers are required to be able to develop students' creative thinking skills.[5] There are two elements in the effort to develop this creative thinking ability, namely the teacher element and the student element.[6] There must be interaction that occurs between teachers and students so that learning objectives can be achieved properly. Students as learning objects are expected to be more active than teachers so that learning can run well and effectively. Students must be good at expressing their opinions so that students not only receive the information conveyed by the teacher but can also develop it.[7]

Improving the quality of education must be carried out by mobilizing all components that become subsystems in an education system.[8] The first and foremost subsystem in improving the quality of education is the teacher factor the success or failure of achieving

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[2] Wahid, Azhar, et al. "Digital technology for indigenous people's knowledge acquisition process: insights from empirical literature analysis." *International Conference on Information and Communication Technology for Competitive Strategies*. Singapore: Springer Nature Singapore, 2023.

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[4] Dewi Puspita Sari Septi Amtiningsih, Sri Dwiastuti, "Peningkatan Kemampuan Berpikir Kreatif Melalui Penerapan Guided Inquiry Dipadu Brainstorming Pada Materi Pencemaran Air," in *Proceeding Biology Education Conference*, 2016.

[5] Hafshah Safrindra F, Asrori, and Rusman. 2023. "Questions Students Have Method: Improvement Creativity and Learning Outcomes in Islamic Education". *Risalah, Jurnal Pendidikan Dan Studi Islam* 9 (2):552-64. https://doi.org/10.31943/jurnal_risalah.v9i2.478.

[6] A. Ridlwan, M., & Asrori, "Problems of Implementation of Islamic Religious Education at Muhammadiyah Junior High School 4 Gadung Surabaya," in *In International Conference on Islamic and Muhammadiyah Studies (ICIMS 2022)* (Atlantis Press, 2022), 312–18, https://doi.org/https://doi.org/10.2991/assehr.k.220708.039.

[7] R. Hamid, A., Asrori, A., & Rusman, "Implementation of Active Learning Methods in Islamic Elementary School/Implementasi Metode Active Learning Di Madrasah Ibtidaiyah," *Al-Mudarris: Journal Of Education* 5, no. 1 (2022): 54–71, https://doi.org/10.32478/al-mudarris.v5i1.932.

[8] R. Mutaqorribain, S., Asrori, A., & Rusman, "The Effect of Teacher's Motivation on Student Learning Activities in Islamic Education Lessons," *Nazhruna: Jurnal Pendidikan Islam* 5, no. 3 (2022): 887–907, https://doi.org/https://doi.org/10.31538/nzh.v5i3.2101.

educational goals depends a lot on how the learning experienced by students.[9] Education as an effort to provide knowledge, insight, skills, and certain expertise to students so that the talents and abilities possessed by students can develop, this education is related to the learning process in developing the capacity to learn and think, as well as the potential of students optimally.[10] Optimizing student potential, in various abilities is a hope that must be realized.[11]

However, in reality, what is currently happening is a learning system that still uses the teacher center system. Students tend to be hesitant and afraid to express opinions. Students think that what the teacher said is true. Teachers also use an inappropriate learning approach[12] there are still many Islamic Education teachers using a lecture learning approach and do not provide opportunities for students to think so that students become insecure and passive.[13] This learning is not effective because it can close the potential of children who should be able to act more. In fact, at a young age students have imagination and creativity that should be channeled.[14]

Teachers tend to only pay attention to good grades in learning but do not see the potential that exists in children in terms of their thinking abilities. As a result, students' creative thinking skills in solving problems are not paid attention to by the teacher. This has an impact on students' thinking skills which are monotonous in solving problems.[15] Students should be able to have various ways of solving the problems they face. This is because the teacher uses an inappropriate approach. Most Islamic Educayion teachers still use the lecture learning method in the process, so that children tend to be passive and just silently receive information from the teacher without any motivation to develop this information.[16]

Teachers should have the right learning approach so that students can play an active role in class. Teachers must look for learning models that focus on children so that children are no longer passive and afraid to speak. The right learning model will later make students as subjects who are able to explore ideas and solve problems in a variety of creative ways. Meanwhile, the teacher is only a motivator and facilitator, no longer the center of learning in the classroom[17] teachers are expected to have special abilities or competencies to provide the

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[9] A Istapra, E., Sasongko, R. N., Kristiawan, M., Kusumah, R. G. T., & Walid, "Interpersonal Intelligence: A Strengthening in Efforts to Improve Student Learning Achievement," *Education Quarterly Reviews* 4, no. 2 (2021), https://doi.org/10.31014/aior.1993.04.02.202.

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[14] M. Asrori, A., & Munawir, *Anomali Perilaku Remaja Dialektika Fitrah Manusia Dan Pendidikan Islam* (Batu: Literasi Nusantara, 2020), http://repository.um-surabaya.ac.id/4458/.

[15] A Asrori, "GLS Role as a Process of Learning Motivation in PAI Lessons in Kedanyang SDN Gresik," in *In Proceeding: The Annual International Conference on Islamic Education*, 2019, (Vol. 4, No. 1, pp. 10-17).

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[17] M. C. Hidayat, "Strategy Cognitive Restructuring Guidelines As Alternative To Improve The Self-Concept Of Students Underachiever," in *In International Conference on Islamic and Social Education*, 2020, Vol. 1, No. 1.

best service for their students. For that, there needs to be interaction between the two parties.[18]

The conditions in SMP Muhammadiyah 1 Surabaya through the results of initial observations and pre-tests were conducted to measure the level of students' creative thinking abilities in class IX. Observation results can be seen that students do not have the ability to think creatively. This can be seen from the way they answer the teacher's questions. The way they answer questions is only sober and tends to be the same. From the pre-test results of 24 students, only 3 students were able to provide creative and different answers. For this reason, a learning approach is needed that can increase children's motivation and guide children to be able to always express their opinions. According to researchers, one of the alternative solutions to the problem above is by using the 5e learning cycle approach. Learning cycle 5e has many advantages including: increasing learning motivation because students are actively involved in the learning process, forming creative thinking in conveying opinions and ideas, fostering learning activities, learning becomes more meaningful.[19] The 5e learning cycle approach is a learning model based on constructivism theory in which students build their own knowledge by associating it with previous experiences they have had so that it is hoped that the learning process will be student-centered.[20] The learning cycle approach initially consisted of 3 stages including exploration, concept introduction and concept application. This model was first developed by Robert Karplus in "the Science Curriculum Improvement Study/SCIS".[21] This three-stage model was further developed by Robert Bybee in 1997 into 5 stages, namely, engage, explore, explain, elaborate, and evaluate.[22] Based on this description, the researcher is interested in conducting research with the title Improving Creative Thinking Skills Through the 5E Learning Cycle Approach Aqidah Akhlak lesson at SMP Muhammadiyah 1 Surabaya

METHOD

The research method used is a qualitative research approach or descriptive research type. The results of this study were taken directly by researchers to research subjects by means of personal and group approaches, by observing behavior in certain objects, carried out thoroughly by describing them in sentence form.[23] The research subject is one of the personal targets under study which will produce conclusions from the research, while the research object is a supporting facility or situation that is very closely related to the research subject being carried out. The subjects of this study were students and students at SMP

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[18] R. G. T. Suntani, U. T., Sasongko, R. N., Kristiawan, M., Walid, A., & Kusumah, "The Role of Principal Interpersonal Communication on Teacher's Work Motivation," *Education Quarterly Reviews* 4, no. 2 (2021).

[19] Dina Liana, "Penerapan Pembelajaran Siklus Belajar (Learning Cycle 5e) Terhadap Hasil Belajar IPA Siswa Kelas VI SDN 007 Kotabaru Kecamatan Keritang," *MITRA PGMI: Jurnal Kependidikan MI*, 2020, https://doi.org/10.46963/mpgmi.v6i1.127.

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[21] Wena Made, *Strategi Pembelajaran Inovatif Kontemporer: Suatu Tinjauan Konseptual Operasional* (Jakarta: Bumi Aksara, 2011).

[22] R W Bybee et al., "The BSCS 5E Instructional Model: Origins, Effectiveness, and Applications," *Bscs*, 2006.

[23] Abd. Hadi, Asrori, and Rusman, *Penelitian Kualitatif Studi Fenomenologi, Case Study, Grounded Theory, Etnografi, Biografi*, CV. Pena Persada, 2021.

Muhammadiyah 1 Surabaya and the object of this research was the improvement of creative thinking skills in Akidah Akhlak lessons. There several data collection techniques used: observation, interviews and documentation. For data analysis using: data reduction, data display, conclusion drawing.[24]

RESULTS AND DISCUSSION
Creative Thinking Skills of SMP Muhammadiyah 1 Surabaya Students

Thinking is a dynamic process that takes three steps: formation of understanding, formation of opinions and formation of decisions. Thinking involves manipulating activities transforming information in memory. We think to form concepts, reason, think creatively, make decisions and solve dilemmas.[25] Creative thinking will not be born suddenly without ability. Curiosity is high and followed by using skills in reading. as stated by Porter and Hernacki that a creative person always has curiosity, wants to try adventurous intuitively.[26] Among the indicators for assessing the ability to think creatively applied by the teacher in learning are:[27]

Table 1. Indicators for evaluating critical thinking skills

Indikator	Information
Fluency	Students are able to express ideas
Flexibility	Students are able to provide different views based on the reading sources found
Authenticity	Students are able to express detailed answers, as well able to analyze the answer
Detail	Students are able to express answers accurately

Based on the results of observations and interviews with 37 Class IX students of SMP Muhammadiyah 1 Surabaya. There were around 21 students who said they had not been able to study independently in understanding the Aqidah Akhlak subject matter. Many factors influence this, including students paying less attention to subject matter because many students think that Akidah Akhlak lessons are less interesting (boring) because the way they are delivered so far is monotonous, the level of students' creative thinking is weak which can be seen from students who have not been able to make lattice of a problem, students have not been able to solve a problem given by the teacher, students have not been able to show different answers given by the teacher.

The results of the interview with Istamarudin S.Ag., as a class IX Akidah Akhlak teacher, how are students' creative thinking skills? Istamarudin S.Ag said that "regarding

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[24] Asrori, A., & Rusman, R., *Classroom Acion Research: Pengembangan Kompetensi Guru* (Banyumas: Pena Persada, 2020).

[25] Jhon W. Santrock, *Educational Psycology* (New York: McGrow Hill, 2011).

[26] Hadma Yuliani, "Keterampilan Berpikir Kreatif Pada Siswa Sekolah Menengah Di Palangka Raya Menggunakan Pendekatan Saintifik," *Jurnal Pendidikan Fisika Dan Keilmuan (JPFK)*, 2017, https://doi.org/10.25273/jpfk.v3i1.1134.

[27] Kipty Aviatri Marta, "Open Ended: Inisiatif Model Pembelajaran Tajwid di Lembaga Pendidikan Islam," *Jurnal Pendidikan Agama Islam Al-Thariqah* 7, no. 1 (2022): 169–81.

students' creative thinking abilities, she confirmed that the level of creative thinking of students at SMP Muhammadiyah 1 Surabaya is still weak. He further said that the formation of creative thinking skills for students is very important, because with a good level of creative thinking students, students will be able to easily understand and master the material provided by the teacher. he said the efforts made to make students' creative thinking abilities at SMP Muhammadiyah 1 Surabaya in the Aqidah Akhlak subject were as follows, applying the only learning method with the 5e learning cycle approach.

The 5E Learning Cycle Approach in Akidah Akhlak Lessons at SMP Muhammadiyah 1 Surabaya

The 5E learning cycle is a series of stages of learning activities that are made in such a way that students are able to master the competencies that must be achieved in the learning process in the classroom. According to Ngalimun, the teacher's learning cycle model acts as a facilitator whose job is to manage the ongoing phases in the learning cycle from planning, implementation to evaluation.[28]

The 5E learning cycle learning model provides opportunities for students to build concepts in their knowledge independently, familiarizes students in formulating, dealing with, and solving problems encountered. According to the syntax of the learning model, the 5E learning cycle has five phases or stages of learning. According to Bass, the activities given to students at each stage of the 5E learning cycle learning model for students can help carry out learning in class properly.[29] The following table presents several learning activities or methods that can be carried out in each phase of the 5E learning cycle model:[30]

Table 2. Learning Activities in Each Phase of the 5E Learning Cycle

Phase 5E	Methods
Engagement: preparing (conditioning) students themselves, knowing the possibility of misconceptions, arousing student interest and curiosity (curiosity).	1. Demonstration by teachers or students. 2. Questions and answers in order to explore prior knowledge, experiences and ideas of learners. 3. Students are invited to make predictions about the phenomena that will be studied and proven in the exploration stage.
Exploration: students work together in small groups, test predictions, make and record observations and ideas	1. Demonstration. 2. Practicum. 3. Working on LKS (Student Activity Sheets)
Explanation: students explain concepts in their own sentences, teachers ask for evidence and clarification of their explanations in directing discussion activities, students find terms from the concepts being studied.	1. Review the literature 2. Class discussion

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[28] Ngalimun, *Strategi Dan Model Pembelajaran* (Yogyakarta: Aswaja Presindo, 2016).

[29] A. A. Bass, J. E Contat, T.L. and Carin, *Teaching Science as Inquiry* (Boston: Pearson, 2009).

[30] Ngalimun, *Strategi Dan Model Pembelajaran*.

Elaboration (extention): students apply concepts and skills in new situations.	1. Advanced demonstration 2. Advanced practicum 3. Problem solving
Evaluation: evaluation of the effectiveness of the previous phases; evaluation of knowledge, concept understanding, or learner competencies in new contexts which sometimes encourage students to carry out further investigations	1. Reflection on the implementation of learning. 2. Written test. 3. Problem solving.

Based on an interview with Istamarudin S.Ag., as a teacher of Akhlak Aqidah as follows: "in the application of the 5E learning cycle at SMP Muhammadiyah 1 Surabaya, there are several steps in the approach process in learning:

1. The engagement phase, the teacher tries to arouse and develop students' interest and curiosity about the topic "Living the etiquette of Islamic youth association". This is done by asking questions about factual processes in everyday life (which relate to the topic of adolescent association). In this case the teacher must build a link between the daily experiences of students and the learning topics that will be discussed in Aqidah Akhlak lessons.

2. Exploration phase, during the exploration stage small groups of 5-7 students are formed then given the opportunity to work together in small groups without direct learning from the teacher. In this group students are encouraged to test hypotheses and/or create new hypotheses regarding the current condition of the adolescent social environment, then try alternative solutions with a group of friends, make and record observations and ideas or opinions that develop in discussions. At this stage the teacher acts as a facilitator and motivator. Basically the purpose of this stage is to check the knowledge possessed by students whether it is correct, still wrong, partially wrong, or partially correct.

3. Explanation phase, at the learning stage, teachers are required to encourage students to explain a concept with their own thoughts, ask for evidence and clarification of student explanations, and listen critically to each other's explanations between students or teachers. With this discussion, the teacher provides definitions and explanations about presenting commendable moral behavior regarding adolescent association, using the explanations of previous students as a basis for discussion.

4. The elaboration phase, students apply the concepts and skills they have learned in new situations or different contexts. Thus, students will be able to learn meaningfully, because they have been able to apply the concepts they just learned in real situations. If this stage can be well designed by the teacher, the learning creativity of students will increase. Increasing student learning creativity can certainly encourage increased student learning outcomes.

5. Evaluation Phase, at the evaluation stage, the teacher can observe the knowledge or understanding of students in applying new concepts. Students can carry out self-evaluations by asking open-ended questions and looking for answers using

observations, evidence, and explanations obtained previously. The results of this evaluation can be used by the teacher as material for evaluating the process of applying the learning cycle method that is being implemented, whether it is going very well, good enough, or still lacking. Likewise, through self-evaluation, students will be able to find out deficiencies or progress in the learning process of Akhlak Aqidah.

Improving Creative Thinking Skills Through the 5E Learning Cycle Approach in Akhlak Aqidah Lessons at SMP Muhammadiyah 1 Surabaya

In creative thinking can be measured through several indicators including: 1) Fluency, a student's ability to express opinions in learning. 2) Flexibility, a thinking skill that is not aligned with the use of most people, looking for other ways of varying answers, giving asynchronous considerations to the situation at hand, and being able to change the direction of thinking impulsively. 3) Authenticity, the ability of students to create new things that are unique, produce unusual combinations for self-signification, seek new approaches to solving problems in their own way. 4) Detail, able to convey an idea he received. students have detailed skills not quickly satisfied using simple knowledge.[31]

Based on the results of an interview with Istamarudin S.Ag, said that "The relationship with students' creative thinking abilities is definitely different. If directed at the ability to think creatively, of course not all students can be invited to that realm. Initially there were only 16 students who had the ability to think creatively out of 37 students. To improve my creative thinking skills 5E Learning Cycle Approach to improve students' creative thinking skills." The results of observations of increasing creative thinking skills through the 5E Learning Cycle Approach in Akidah Akhlak lessons at SMP Muhammadiyah 1 Surabaya, include:

1. On average, almost all class IX students of SMP Muhammadiyah 1 Surabaya are fluent in expressing opinions related to the theme of reviving youth culture. it can be seen that students in the learning process dare to express their opinions so that the learning atmosphere is active

2. Flexible thinking skills that are not the same as most people, looking for varied alternative answers, giving considerations that are not in sync with the situation at hand, and being able to change the direction of thinking spontaneously. This is very visible when there are discussions in their respective groups where they convey answers to questions when the material learning activities live up to the etiquette of Islamic youth association.

3. Authenticity, the skill of students in generating new, unique ideas, producing unusual combinations to prove themselves, looking for new approaches to solving problems in their own way. This seems to have summed up a question that was asked and developed the theme "living the etiquette of Islamic youth association."

4. Detail, class IX students at Muhammadiyah 1 Surabaya Middle School were able to convey the ideas they received regarding the material learning activities live up to the etiquette of Islamic youth association. students who have detailed skills are not easily satisfied using simple knowledge so they continue to seek detailed information

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[31] Nurdinah dan Julia. Hanifah, "Membedah Anatomi Kurikulum 2013 Untuk Membangun Masa Depan Pendidikan Yang Lebih Baik," in *Prosiding Seminar Nasional Pendidikan Dasar* (Sumedang: UPI, 2015).

CONCLUSION

The implementation of the 5E Learning Cycle approach in *Aqidah Akhlak* lessons at SMP Muhammadiyah 1 Surabaya has proven effective in improving students' creative thinking skills. This approach, encompassing the stages of engagement, exploration, explanation, elaboration, and evaluation, fosters an interactive and student-centered learning environment. Students demonstrated significant improvement in critical aspects of creative thinking, including fluency, flexibility, originality, and detail. These findings highlight the potential of the 5E Learning Cycle as a practical framework to enhance creative thinking skills, making it a valuable pedagogical method for addressing the demands of 21st-century education. Future research could extend this approach to other subjects and educational contexts to validate its broader applicability.

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