

Implementation of the Jatmika Learning Model Based on Artificial Intelligence to Improve Students' Critical, Creative, and Reflective Thinking in Creative Literary Writing Learning

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ABSTRACT

Keywords:

Critical Thinking,
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Model,
Reflection

This study aims to describe the implementation of the Jatmika learning model based on artificial intelligence to improve critical, creative, and reflective thinking skills for PBSI undergraduate students of the 2023 cohort, Faculty of Language and Arts, Surabaya State University, in producing creative writing in the form of poetry. This research is qualitative in nature with a descriptive qualitative approach. The research subjects are S-1 Indonesian Language and Literature Education students, Faculty of Language and Arts, Unesa, class of 2023, taking the poetry appreciation course. Data collection techniques through observation, interviews, observation, and documentation. The data was analyzed using reduction, presentation, and verification. The results of this study indicate that creative writing, especially poetry, requires the involvement of lecturers and students in the critical, creative, and reflective use of artificial intelligence (AI). This shows the need for additional skills development. Continuous training and education are key to ensuring that all parties can reap the maximum benefits of this technology.

INTRODUCTION

This study was motivated by initial observations directly conveyed by several students who experienced anxiety when writing. Undergraduate students majoring in Indonesian language and literature who took the poetry appreciation course had difficulty appreciating literature, especially poetry. This course is compulsory for undergraduate students majoring in Indonesian language and literature in the 2023 even semester. Based on interviews with students at the beginning of the semester on April 3, 2024, it was found that appreciating poetry requires the ability to choose words, figures of speech, and themes to create beautiful poetry. The difficulties faced by students on average are how to come up with ideas, choose words, determine the approach, typography, enjambment, and theme, so a Jatmika learning model is needed to improve critical, creative, and reflective thinking. In writing poetry, it is also necessary to know how to utilize artificial intelligence, which requires students to have high-level skills that enable them to adapt and develop in various conditions or environments.

The above phenomenon shows that appreciating poetry requires the ability to think critically, creatively, and reflectively. This will support problem-solving skills involving ways of thinking ranging from the selection of writing ideas, word choice, figure of speech selection, and poetry interpretation. In dealing with problems in the poetry appreciation course above, a solution needs to be found that can support this, namely with the Jatmika learning model by utilizing artificial intelligence.

The selection of ideas for poetry appreciation activities can utilize artificial intelligence. With creativity and innovation, students will be able to generate new ideas and

implement them effectively. Artificial intelligence (AI) is one of the technologies in the era of the Fourth Industrial Revolution that is very useful to apply and should be utilized by educators, educational staff, and students in the learning process to achieve learning objectives. On the other hand, the negative impacts of AI technology are: a) the main cause of students' laziness to study hard to meet their competencies, b) lack of creativity and critical thinking skills, especially among the younger generation, which will cause the country's human resources to fall behind and be unable to compete with human resources from other countries, especially if they have to compete with developed countries in today's open era, c) ethics (honesty and plagiarism), d) data privacy, and e) a lack of in-depth understanding of AI.

Research by Salmi and Setiyanti (2023) shows that students have a positive perception of the use of ChatGPT as a learning tool in the era of Education 4.0. In general, students feel that ChatGPT is easy and practical to use (PEOU). Students believe that ChatGPT can provide benefits in improving their quality, creativity, knowledge, and skills as students. Additionally, students have a positive attitude toward the use of ChatGPT, considering it easier, more enjoyable, and more satisfying (ATU). However, there are some students who experience difficulties when accessing ChatGPT and have lower motivation to encourage fellow students to use ChatGPT. These conclusions are based on the results of descriptive statistics tests that provide an overview of students' perceptions of the ease of use, benefits, attitudes, and intentions related to the use of ChatGPT as a learning tool in the era of Education 4.0. Waluyo et al.'s (2023) research shows that ChatGPT has the innovation to find thesis topics that have novelty value. ChatGPT is even capable of recommending thesis topics that are requested according to the student's preferences and field of study.

Based on a review of relevant previous studies, no research has been found on the development of a learning model based on Javanese philosophy that relies on AI to improve critical, creative, and reflective thinking in creative writing, especially poetry appreciation. The novelty of this research lies in the development of a learning model rooted in Javanese philosophy (in this case, JATMIKA), which is an acronym for: J: Jelajah (Orientation), A: Ancang (Preparation), T: Tindak (Action), M: Mekar (Creation), I: Imbang (Comparison), K: Kabar (Communication), A: Andalan (Justification). This study aims to improve critical, creative, and reflective thinking among students (learners) in creative writing in poetry appreciation courses.

RESEARCH METHOD

This research is a developmental study with a qualitative descriptive design. The research subjects are students of the 2023 AB class of the Indonesian Language and Literature Education undergraduate program at the Faculty of Humanities, Unesa. The research was conducted in the even semester of 2024/2025. The data used were student assignments, functional assignments, and learning arrangement selections. The data source was the SAP document of the poetry appreciation course lecturer. Data collection was carried out through documentation, participatory observation, observation, interviews, and observation. Data analysis was carried out using a process of reduction, presentation, and verification.

RESULTS AND DISCUSSION

Arends (2001: 159-165) states that the term learning model refers to a specific learning approach, including its objectives, syntax, environment, and management system. Arends chose the term model for the following reasons: (1) the term model has a broader meaning than strategy, method, or procedure, (2) models can serve as an important means of communication, whether discussing teaching in the classroom or the practice of supervising children. Learning models are classified based on learning objectives, syntax, and the nature of the learning environment.

A learning model is defined as a systematic procedure for organizing learning experiences to achieve learning objectives. Learning models (Teaching Models) or (Models of Teaching) have a broader meaning than methods, strategies/approaches, and procedures. The term learning model refers to a specific approach to learning that encompasses objectives, syntax, environment, and management systems (Arends, 1997:7). The characteristics of learning models include: (1) having theoretical rationalization, (2) being related to learning outcomes, (3) being based on teacher behavior, and (4) requiring classroom structure. The types of learning models according to Richard I. Arends include: direct instruction, cooperative learning, problem-based instruction, and learning strategies.

This discussion will explain that creative writing in poetry appreciation courses requires activities supported by the use of artificial intelligence (AI). The use of AI in this course was developed using the Jatmika learning model, which is an acronym for: J: Exploration (Orientation), A: Preparation, T: Action, M: Creation, I: Comparison, K: Communication, A: Justification. The application of the JATMIKA model builds an interactive relationship between educators and students. Based on Tjahjono (2002:15), all steps of the learning model are applied to poetry appreciation learning, which includes the following activities: (1) reception, (2) production, (3) performance, and (4) documentation.

Table 1. All Syntax Steps of The Learning Model

No.	Work Stage/Step	Lecturer Activities	Student Activities
1	J: Jelajah (Orientasi)	Searching for learning resources from AI in accordance with the competencies to be taught	Students search for and find learning resources by reading reference books related to poetry.
2	A: Ancang (Preparasi)	Preparing to leap toward the final learning goal	Students adapt to learning objectives
3	T: Tindak (Aksi)	implementation of learning in accordance with orientation and preparation	Students engage in learning activities
4	M: Mekar (Kreasi)	development of new concepts	Students develop new concepts developed by implementing the jatmika learning model.
5	I: Imbang (Komparasi)	comparison of the differences between new creative concepts	Students compare conventional concepts with the Jatmika model.

		and old concepts to demonstrate novelty	
6	K: Kabar (Komunikasi)	presentation of learning outcomes from processes 1-5 in various forms of publication (poetry anthology)	Student learning outcomes in the form of poems describing how to use AI-based learning models
7	A: Andalan (Justifikasi)	justification: confirmation of the learning process and outcomes	Students present a learning model using AI in the form of poetry

Based on the research conducted, creative writing, particularly poetry writing, using the Jatmika learning model with artificial intelligence in class A of the 2023 cohort began with (1) Exploration through needs analysis, literature study, or reference study as initial activities. The activity was conducted through interviews and questionnaires related to the importance of learning models. This activity was carried out by searching for learning resources from AI in accordance with the competencies to be taught. The results show that the availability of various learning models and applicable teaching materials can facilitate learners in the learning process that adapts to technology to facilitate the use and enhancement of creativity in critical, creative, and selective thinking. Students explore all ideas, concepts, and thoughts through reading books and observing their surroundings to gain ideas. The needs analysis shows that 80% of teachers stated that students need to process information based on their experiences as preparation for writing. A total of 90% of teachers stated that honing writing skills resulted in quality output in terms of students' speaking and writing. A total of 85% of teachers stated that input that was appropriate to learning needs made it easier to understand the teaching material in accordance with the Semester Learning Plan (RPS). A total of 90% of teachers stated that the learning process required learning models and teaching materials that were systematically arranged through teaching modules. Activity (2) A: Preparation, which involves preparing for the final learning goal. This activity designs a model by formulating general and specific learning objectives, then developing test items or questions to measure student progress and the level of achievement of the formulated objectives, and finally developing learning strategies. The instructor conveyed the final learning objective: to be able to write poetry using AI. This was demonstrated based on the learning outcomes, which showed that 90% of the students had access to the resources needed to write poetry.

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Successful learning implies thoroughness in learning and thoroughness in the learning process. This means that thorough learning is the achievement of competencies that include knowledge, skills, attitudes, or values that are manifested in habits of thinking

and acting. The benchmark for learning mastery refers to competency standards and basic competencies as well as indicators contained in the curriculum. Meanwhile, mastery in learning is related to implementation standards involving lecturers and students. In the next meeting, the activity carried out is step (3) T: Action. The activity carried out is the implementation of learning in accordance with the orientation and preparation. The choice of words or diction is based on the theme chosen by each student. Students utilize AI so that 90% of the words used are relevant to the topic. In this case, students are invited to experience for themselves the joys and sorrows of writing poetry. In fact, there is no specific theory in writing poetry. Poetry, as a form of personal expression, will reflect the style of each writer. Students' interest in the ease of this learning process has increased. This is due to the latest learning process that no longer recognizes space and time. The use of technology such as artificial intelligence with its various applications, such as virtual meetings, assessments, and electronic books, directly facilitates the learning environment for students. Students' interest in learning models that maximize the results of information in everyday life and can be accessed digitally is very high. Because the era of technological advancement has made it easier for students to access learning and improve the quality of authentic learning outcomes. The next activity is (4) M: Mekar (Creation). The activity carried out is the development of new concepts for writing poetry. This concept requires ideas that require poets to develop new concepts for writing poetry. The surrounding environment that is observed can be an inspiration in creating a poem. This shows that 95% of students write based on experiences that are created with artificial intelligence. With the results of writing poetry, the activity continues to (5) I: Imbang (Comparison). The activity carried out is comparing the differences between new concepts created with old concepts to show novelty. Students compare conventional concepts with models created based on their explorations using artificial intelligence. The selection of words used in writing poetry based on experience using artificial intelligence is different, which shows that the use of technology through artificial intelligence can help in writing poetry. Next (6) K: News (Communication), the activity of presenting the learning outcomes from processes 1-5 in various forms of publication (poetry anthology books). The students' learning outcomes in the form of writing poems describe how to use AI-based learning models. Each class in the 2023 PBSI batch produced a poetry anthology. The final stage is (7) A: Justification, which involves affirming the learning process and outcomes. Students present the AI-based learning model in the form of poetry.

Table 2. Example of a Poem Written By a Student

Abuse of Power (Fibrianita)	The Earth's Lungs Are Wounded (Ibnu Choiruddin)
Promises Behind the Scenes The leader's tongue sings beautifully Words arranged like sweet songs Captivating rhetoric, lulling the people Turning lies into false truths Promises scattered, hopes sold But reality is only a gray shadow Rhetoric becomes a weapon, stabbing slowly Leaving wounds on trust	Lush forests, the lungs of the earth, Severely wounded, ravaged by human greed. Trees fall, soil erodes, Rivers polluted, air suffocating. Toxins spread, the earth cries out, Nature weeps, humans remain oblivious. When will we wake up, before it's too late, The earth is wounded, no longer alive. Let us protect it, before all is lost,

The people don't need empty speeches They thirst for real action Let's be sensible and choose a true leader Not just someone who is good with words.	Plant trees, preserve the natural world. So that the earth remains sustainable, For our children and grandchildren, forever.
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CONCLUSION

Learning to appreciate poetry, especially writing poetry using the JATMIKA learning model, utilizing artificial intelligence (AI) can help students. This involves the mind, mood, feelings, and environment so that students can think critically, creatively, and reflectively. The syntax in the JATMIKA learning model helps in appreciating poetry through activities consisting of reception, interpretation, production, and performance. Through the JATMIKA model, the results of writing in the form of poetry can be done easily by utilizing artificial intelligence (AI), so that learning outcomes can be improved.

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