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Efforts to increase the learning motivation of Class XI-MBA students with art exhibition materials through Artsteps Media

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Abstract
The main problem is that students are less motivated to learn because the material is theoretical, tends to be monotonous, boring, and uninteresting. Using Artsteps Media, this project aims to improve the learning motivation of class XI-MBA students at SMA Negeri 4 Malang to learn about art and culture. Classroom Action Research (CAR), developed by Kemmis and McTaggart, was used in this study. This study was conducted in two cycles with four stages, namely planning in the first stage, action in the second stage, observation in the third stage, and reflection in the fourth stage. A total of 35 students participated in the activity. Data collection methods include observation, interviews, performance tests, and documentation. Based on the results of the study, students' learning motivation increased in pre-cycle from 29% to 100% in cycle II. By depicting a virtual exhibition space, the use of Artsteps Media can make learning more interesting and encourage students to participate more actively. This study shows the effectiveness of using Artsteps Media in improving students' learning motivation in studying art and culture with art exhibition materials.

1. Introduction

Education plays an important role in determining the quality of human resources. A key component in education is learning motivation, which greatly influences student engagement and success. When students have low motivation to learn, their interest and excitement in participating in educational activities decreases, which ultimately prevents them from achieving optimal outcomes. Conversely, when motivation is high, students tend to be more active in their learning journey and achieve desired goals. Therefore, finding teaching strategies that can increase students' motivation to learn is essential, especially in creative subjects such as Arts and Culture. Arts and Culture is a discipline with significant potential to increase students' creativity and self-expression. However, even with this potential to foster creativity and enthusiasm, learning in the arts and culture is often considered repetitive and uninteresting for many students. Traditional teaching approaches, such as lectures and written assignments, can often create boredom among students and fail to arouse their enthusiasm for full creative expression.

Hamalik (2007) states that "Motivation is a shift in individual energy, which is characterized by the development of emotions and behaviors aimed at achieving goals". Sutikno (2009) states that "Motivation can be described as an all-encompassing driving force in students that spurs, maintains, and guides educational activities, which ultimately leads to the achievement of set goals". Many scholars have articulated definitions of motivation from a variety of perspectives; However, the basic idea remains constant, motivation serving as a driving force that converts individual energy into tangible actions aimed at achieving a specific goal. From the discussion presented, one can conclude that motivation acts as an internal force that drives a person to take the necessary actions to achieve a goal. In the context of education, motivation is considered to be a driving force in learners that stimulates learning efforts, supports their educational journey, and provides guidance for these

activities, ensuring that the desired results are realized. So, learning motivation symbolizes the inner drive or strength in students that triggers engagement and directs their educational efforts to achieve their goals.

Learning motivation refers to the tendency of students to engage in educational activities that are driven by their aspirations to achieve the most beneficial learning outcomes. This motivation fosters a student's desire to learn, while a lack of motivation to learn can reduce that desire and adversely impact their educational outcomes (Saputra et al., 2018). As stated by Desy (2014), motivation is described as a state that allows students to initiate activities, direct these efforts, and maintain focus throughout the educational process. Motivation serves as a driving force that motivates students to stay engaged and committed to learning. The elements and indicators of learning motivation that will be explored in this study include (1) attention, which represents students' concentration and interest in the material introduced by the teacher. (2) Perseverance, which embodies students' determination to complete assignments and maintain consistency in their learning efforts. (3) Enthusiasm, which signifies the joy and enthusiasm of students in taking part in educational activities. (4) Active participation, which relates to the student's involvement in asking questions, providing answers, or engaging in discussions during lessons. (5) Responsibility to assignment, which involves the student's capacity to complete assignments on time and in accordance with the guidelines provided. Therefore, it is important for educators to adopt engaging strategies that encourage active engagement from students. In the field of teaching, research and development refers to the creation of educational resources that require a series of investigations using various approaches, which are carried out through specific phases.

According to Tjahyanti and Setiawan (2019) learning media is any form of advice used to convey messages with a specific purpose from the informant to the recipient, so that the learning process can take place effectively and efficiently in a supportive environment. This statement emphasizes the importance of media in improving the quality of the learning process. Learning media is also understood as a tool in the teaching and learning process that plays a role in fostering students' motivation to learn (Romlah, Nugraha, Nurjanah, & Setiawan, 2019), so that they can understand the material indirectly and the learning goals are achieved. In addition, learning media functions as a means or educational resource that bridges teachers and students to enrich the learning experience in the classroom and strengthen the interaction between the two (Safitri & Koeswanti, 2021). Therefore, educators need to present learning materials using media or resources that are in accordance with the characteristics of students, in order to increase their active participation during the learning process. This strategy aims to foster students' motivation in acquiring knowledge and learning experience effectively, so that they can achieve their educational goals automatically.

In the field of arts and culture education, especially fine arts, the media has a crucial role in stimulating students' interest and curiosity in their learning materials. With technological advancements that have become the hallmark of the 21st century as an educational tool, the media undoubtedly inspires learners while facilitating significant educational encounters. Implementing digital media in the educational process can be the right approach to overcome these challenges. An important innovation to consider is the use of Artsteps, a digital media that is available and can be used through websites and applications that allow students to design virtual art exhibitions, thus introducing an interesting and interactive component to art and culture education. Using Artsteps, learners can create a layout design or spatial layout of their art exhibition work in a digital exhibition format that can be accessed online. This media allows students to be more creative in creating and producing artworks, while providing new experiences in presenting and exhibiting their work to friends and teachers. It is hoped that the use of artsteps will be able to provide a relevant and enjoyable learning experience. Through this medium, students not only learn the concept of art exhibitions, but can also apply them directly in the form of virtual galleries. Thus, learning becomes more exploratory, collaborative, and able to increase students' motivation to learn. Thus, cultural arts learning plays an important role in shaping the character of students to become active, creative, innovative, critical, and courageous individuals (Yulianti et al., 2022).

By utilizing virtual exhibitions, users of the artsteps platform can enjoy and appreciate works of art (Sundari & Rahmalia, 2022). The artsteps application also allows users to easily understand how to operate it, especially in the organization of virtual galleries (Sundari & Rahmalia, 2022). Online exhibitions are defined as web-based storefronts that allow participants to enjoy exhibitions from

various locations without the need to be in a physical location (Sundari & Rahmalia, 2022). The benefits of utilizing the Artsteps tool include (1) serving as an effective educational resource for art exhibitions, (2) allowing the display of three-dimensional images, videos, and items, (3) allowing creators to customize their exhibition spaces, (4) reducing the costs associated with acquiring physical materials for exhibitions, (5) offering flexibility and timeliness, and (6) promoting inclusive educational methods that foster creativity in the application of technology. Educators and students can take advantage of the Artsteps platform to design exhibitions and appreciate artwork. The Artsteps platform is available at no cost, making it easy to use. Moreover, others can view this platform using internet connectivity. The app provides a new experience, giving visitors an experience as if they were in an art gallery in person, exploring the space. Artsteps' technology allows users to easily design three-dimensional virtual exhibition environments, both for indoor and outdoor use, and can also leverage virtual reality (VR) to enhance the realism of the experience. By utilizing this app, it will undoubtedly enhance the educational experience for students as it incorporates technology that nurtures their creativity during the learning process. The disadvantages are (1) having to use a fast and stable internet connection to create, access, and display exhibitions optimally, this can be an obstacle in areas with limited internet access. (2) For beginner users, especially students who are not familiar with 3D design technology, the artsteps interface can feel confusing and require a long time to adapt. (3) Limited to computer or laptop devices, although available in the mobile version, the main features of artsteps are more optimal when used through a computer or laptop device. This can be difficult for students who only have access to mobile devices. (4) Limited interactive features. (5) Limited showroom customization, Although users can choose and arrange virtual showrooms, the choice of room models and architectural styles is still limited, making it less flexible for certain design needs. (6) The rendering process is time-consuming, as it loads a lot of objects or large media files (images/videos), the rendering process can be slow, especially if the device specifications are low.

The importance of motivation in the context of arts and culture education highlights the need for more engaging and relevant methods. The Artsteps media not only encourages students to express themselves more inventively in the creation, design, and presentation of art but also has the potential to increase their drive to learn more diligently. Thus, this study aims to evaluate the level of effectiveness of combining Artsteps media can foster the learning motivation of students in class XI-MBA at SMA Negeri 4 Malang in learning art exhibition materials. SMA Negeri 4 Malang is considered a leading high school, or often called a favorite school located in a prime location near the Malang City Hall Monument. At the heart of governmental and historical significance, the institution is known for its solid academic reputation, supportive learning atmosphere, and the awards its students earn at the regional and national levels. This honorable position makes SMAN 4 Malang a preferred choice for students and their families who prioritize the quality of education.

In this context, it is essential to continue to advance educational innovations that can sustain and even increase students' enthusiasm for learning, in line with the school's mission to become a leading educational institution. By incorporating engaging and cutting-edge digital media, the goal is to foster greater enthusiasm and active engagement in art and cultural learning among students, enhancing their creativity and enabling them to achieve a deeper understanding of art, creativity, and self-expression. Therefore, this article will explore strategies to increase students' motivation to learn by utilizing Artsteps media in the context of art exhibition materials. This research aims to make a meaningful contribution to arts education, offering new perspectives to develop more engaging, fun, and technology-driven methods in arts and culture education to improve the quality of education in schools. What's more, this article seeks to be a resource for educators in utilizing technology to improve motivation and quality of learning. Research conducted by Puspawati, Pratama, and Rahmawati (2024) with the title efforts to increase the learning motivation of fine arts students through artsteps media in PJBL learning in Class XII Science 5 SMA Negeri 8 Denpasar shows that the use of interactive digital media can significantly increase students' learning motivation, especially in a project-based learning environment such as fine arts.

2. Method

This study uses Classroom Action Research (PTK) with the main goal of improving students' learning motivation and learning experience. As stated by Parnawi (2020), the purpose of PTK is to advance education by promoting critical thinking among educators during the teaching and learning process. This research focuses on the use of learning aids to increase student motivation. PTK is a

type of classroom action research that teachers need to conduct to develop their teaching skills and improve the quality of education in schools, which contributes to the development of the broader educational landscape (Astutik et al., 2021). The participants in this study were class XI-MBA students from SMA Negeri 4 Malang, which amounted to 35 people, which included 23 women and 12 men. In line with the statement made by Budiman and Riyanto (2013), PTK functions as an approach to examine and improve learning techniques in the classroom through repeated cycles of actions.

The implementation of this PTK uses a design framework developed by Stephen Kemmis and Mc. Taggart, which includes four stages, namely the initial stage for planning, the second stage for action, the third stage for observation, and the final stage for reflection (Figure 1). Each of these phases is interconnected, just as the execution between the first cycle and the next cycle is interrelated. Cycle II functions as a continuation or improvement of Cycle I, and this pattern continues according to Priharton and Hidayati (2019). This research was conducted in two cycles, with each cycle consisting of two learning sessions. If the results at the end of Cycle I prove inadequate, Cycle II will be continued with refinements informed by insights gained from previous reflections. Data analysis uses qualitative and quantitative descriptive methods. The qualitative descriptive method focuses on variables related to the research process, such as detailing the comprehensive implementation of fine arts education in the classroom, while the quantitative technique assesses the results of the students' action tests by evaluating the average score of students' academic performance, which aims to determine the effectiveness of the research action and the level of student learning motivation achieved.

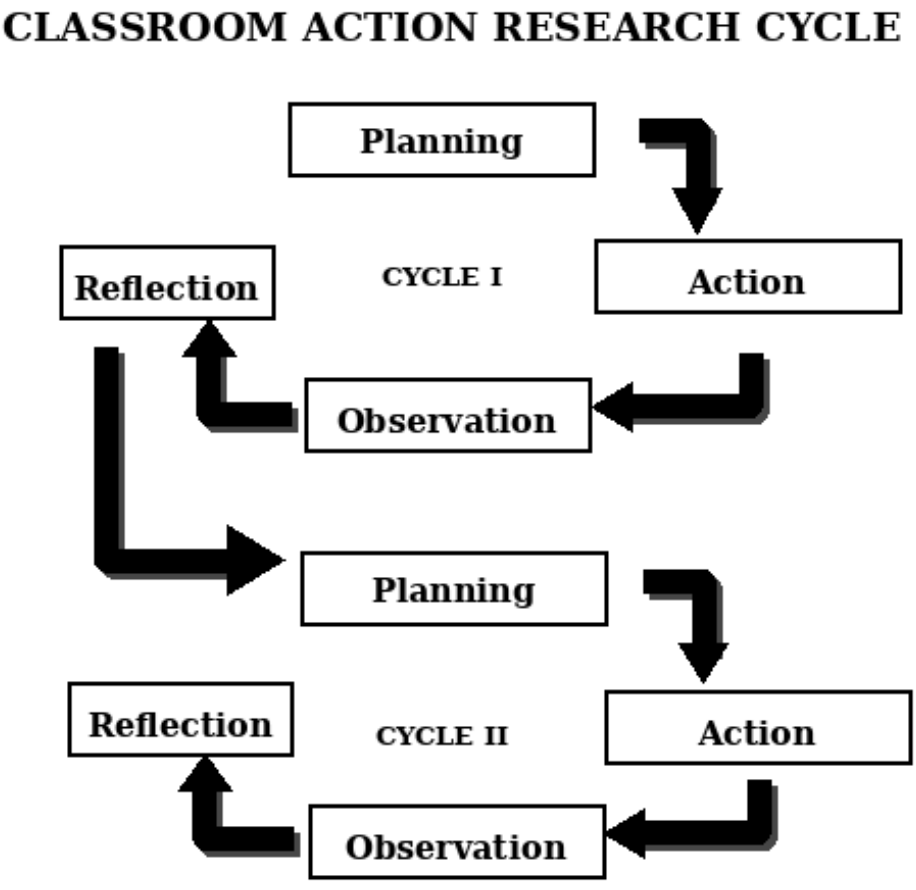

Figure 1. Kemmis and Mc.Taggart PTK Cycle

(Source: Febriani Wulandari, 2025)

The planning process includes the preparation of a learning implementation plan (RPP), the preparation of instruments for observing student involvement and creativity, preparing materials and examples of virtual exhibitions in artsteps, assessment rubrics, LKPD, and interview guidelines.

At the stage of implementing the action, the teacher gave an introduction to the concept of art exhibitions and the introduction of the Artsteps platform. The observation stage is carried out by teachers and collaborators on the active participation of students, the use of technology, and creativity in arranging exhibitions during learning. Furthermore, at the reflection stage, the observation results are analyzed to identify successes and obstacles, reflection is carried out with students to find out their learning experience and can improve the steps in the next cycle. Data collection in this study was carried out through several techniques, namely observation, interviews, performance tests, and documentation. Observation is used to see the activeness and engagement of students during the learning process and the creation of virtual exhibitions. Interviews were used to explore students' responses to the use of Artsteps media in art exhibition activities. The performance test is used to assess students' ability to design and present artworks in the Artsteps platform using a pre-arranged assessment rubric.

Documentation is done by capturing various learning experiences through photos, videos, and student works at Artsteps. The tools used in this study include observation sheets of student and teacher activities, interview guidelines, LKPD, art exhibition assessment rubrics, and documentation. The assessment criteria for art exhibitions include five main components, namely (1) exhibition planning, (2) artworks, (3) collaboration between teams, (4) presentation and cultural communication, and (5) documentation and reflection. Data analysis was carried out using qualitative and quantitative descriptive methods. Qualitative information obtained from observation and interview results was analyzed through a methodical procedure involving data reduction, data presentation, and conclusion drawn. Meanwhile, quantitative data obtained from student performance evaluations is assessed by determining the percentage of success of each indicator in the assessment rubric.

3. Results and Discussion

This research focuses on increasing the learning motivation of students in class XI-MBA at SMA Negeri 4 Malang by utilizing art and culture, especially by using digital learning tools such as the artsteps application for virtual art exhibitions. The findings of this study show a significant increase in student motivation, which is characterized by an increase in activity levels, creativity, and enthusiasm for learning resources. The findings to be discussed include the initial condition of students (pre-cycle), cycle I, and cycle II, which include planning, implementation, and observation. This involves presenting observational and reflection data to infer the effectiveness of actions both in process and outcomes while evaluating the interventions applied. The class action research process involved the following steps.

3.1. Implementation of Pre-Action

Pre-cycle activities were carried out to identify the initial conditions of learning before the implementation of actions through the use of Artsteps digital media. This stage aims to map the problems that exist in the learning process of art exhibition materials in the classroom. The steps in the pre-cycle stage include teachers observing the previous learning process and reflecting on the results of art learning, especially in the aspect of art exhibitions. The main problem found was the lack of enthusiasm of students in discussing the theory of the concept of art exhibitions because the delivery of the dominant material using the lecture method became very monotonous and boring, and the lack of media that supported the presentation of works in an interesting and actual manner. After observation, it was found that the average completeness in this pre-cycle was only 29% or as many as 10 students. Then the researcher conducted reflection and discussion with the teacher of cultural arts subjects to determine the solution. Researchers deployed interest surveys through Google Forms among students to assess their enthusiasm for cultural arts interests and technology integration in education. Informal interviews were conducted to explore students' opinions regarding their experiences in composing or participating in art exhibitions. Preliminary results show that most students feel confused by the concept of curating an exhibition and are not familiar with digital platforms such as Artsteps. Based on the results of observations and questionnaires, it is known that students tend to be passive in learning activities about explaining theories without any direct practice. Based on the analysis of the problem, after the researcher and teacher discussed, it was agreed to design an action through an experiential learning approach that prioritizes students' direct experience in making virtual exhibitions. The Artsteps platform was chosen as an innovative solution because it allows students to organize, organize, and present works in virtual spaces interactively. Based on the evaluation of the observed data on learning motivation before the study,

the average score was 29%. This shows that learning motivation among students is still minimal and very low. More complete details of each indicator can be outlined as shown in Figure 2.

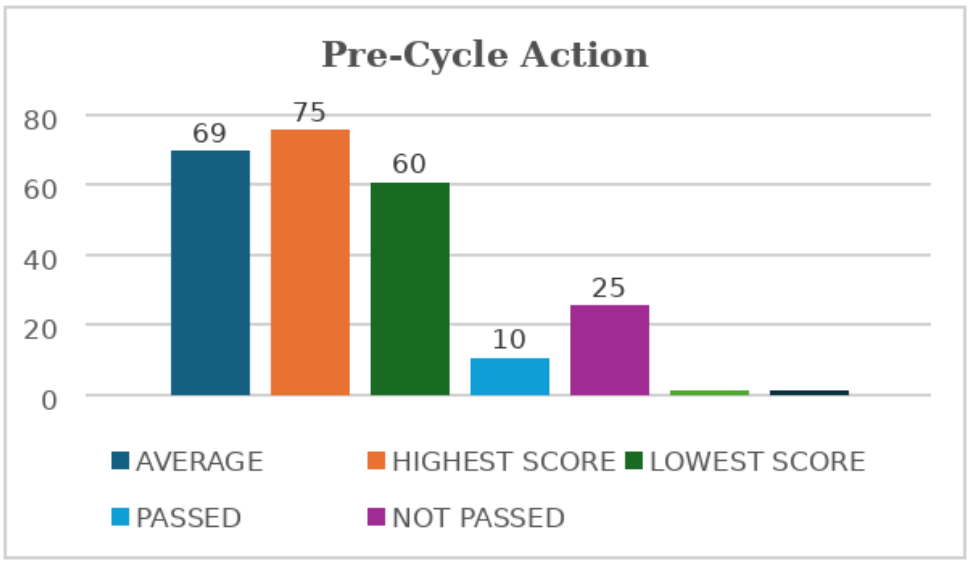

Figure 2. Achievement of Learning Motivation of Pre-Cycle Students

Source: Wulandari (2025)

3.2. Cycle I Action

After the pre-cycle activities are completed, the next stage involves researchers collaborating with educators to formulate learning action strategies, using a project-based learning approach with the digital resources of the Artsteps application. The main objective of this educational initiative is to familiarize participants with the principles of art exhibitions, improve their skills and creativity in curating artworks, as well as utilize technology to exhibit creations in a virtual environment. Develop a learning plan, learning theory/media, and tools for data collection are prepared, including observation sheets aimed at monitoring teacher and student activities, guidelines for interviews, evaluation criteria, and documentation. Furthermore, students are organized into smaller teams and tasked with designing exhibition concepts based on mutually agreed themes.

The learning activity began with an explanation of the material about the concept of a fine art exhibition and the introduction of the Artsteps platform. Students were given examples of using Artsteps and invited to explore the virtual showroom as inspiration. Then, students begin to draft the concept of a group exhibition, create works to be exhibited (paintings, digital drawings, three-dimensional works, etc.), and start creating digital showrooms with the guidance of teachers. During the process, teachers provide technical and aesthetic directions to assist students in developing exhibition designs.

Observations are made to document students' actions and participation throughout their educational journey. Most students show enthusiasm in exploring Artsteps, but some still have difficulty in setting up the layout of the exhibition space and incorporating their work into the layout. Several technical obstacles such as networking and adapting to the use of Artsteps are also obstacles. The teacher also noted that more intensive guidance is still needed in terms of the preparation of narratives and descriptions of the work. In general, student involvement is quite good even though it is not optimal.

From the results of the reflection, it is known that although students have shown interest in Artsteps media, there are still technical obstacles and understanding of curation that need to be improved. The results of the performance assessment showed that the average completion score was at 80% or 28 students reached the "Good" or "Excellent" category. Based on these results, improvements are designed for cycle II, namely by strengthening the curation concept, displaying more examples of professional showrooms, and providing additional technical guidance related to

the use of advanced features in Artsteps. More complete details of each indicator can be outlined as shown in Figure 3.

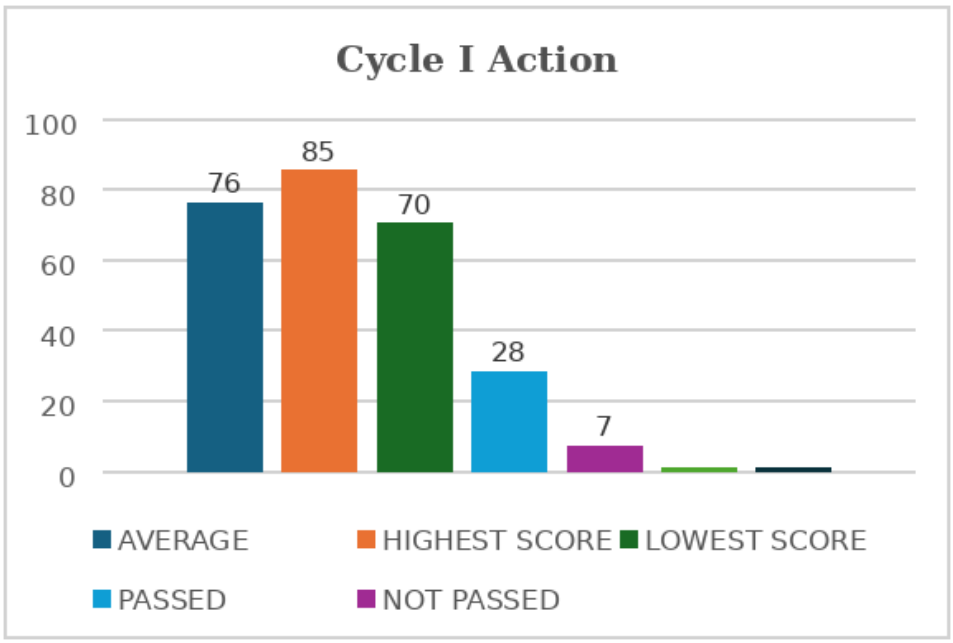

Figure 3. Achievement of Learning Motivation of Student Action Cycle I

Source: Wulandari (2025)

3.3. Cycle II Action

Based on the understanding gained from the first cycle, improvements were made in the action plan to overcome the challenges and obstacles faced by students. The teacher prepared additional modules containing technical guidance on the use of Artsteps, examples of professional virtual exhibitions, and strengthening understanding of exhibition curation. In addition, a more intensive mentoring strategy was prepared in the form of groups, where teachers provide direct guidance when students arrange showrooms. Observation instruments, skill assessment rubrics, and interview guidelines are still used with adjustments to achievement indicators.

At this stage, after the improvement obtained from reflection in cycle I, cycle II produces much better results. Students are able to compose and create virtual exhibitions with more mature concepts based on their respective themes that have been agreed upon with their groups, featuring more developed ideas and beautiful creativity. Skills in the use of Artsteps media have improved tremendously. They are able to add narrative, interactive, and aesthetic elements to the digital showroom. Students continue to refine the virtual art exhibition project. They began to be more confident using Artsteps' advanced features such as light settings, and text narration on the work. Each group presented its exhibit concept and received feedback from teachers and classmates to improve the quality of the visual presentation and exhibit content. Students were also given the task of compiling a digital catalog of exhibitions as a complement.

The results of the observation showed a significant increase in student activity and involvement. The entire group successfully completed the digital art exhibition project well. Students demonstrate the ability to work together in a team, understand the flow of exhibition curation, and be able to communicate artistic messages through virtual media. The teacher noted that 90% of students actively asked, discussed, and were enthusiastic in exploring their respective showrooms.

Reflection shows that the goals of education have been successfully achieved. The results of the performance assessment showed a significant improvement, with an average of all students being in the "Good" to "Excellent" category, the completeness score reached 100%. The students respond well to the integration of Artsteps, as it offers an educational experience that is contemporary, enjoyable, and relevant in line with technological advancements. The research conducted in cycle II was

considered successful, as it met the success criteria, in particular improving exhibition curation skills and increasing overall learning motivation among students. More complete details of each indicator can be outlined as shown in Figure 4.

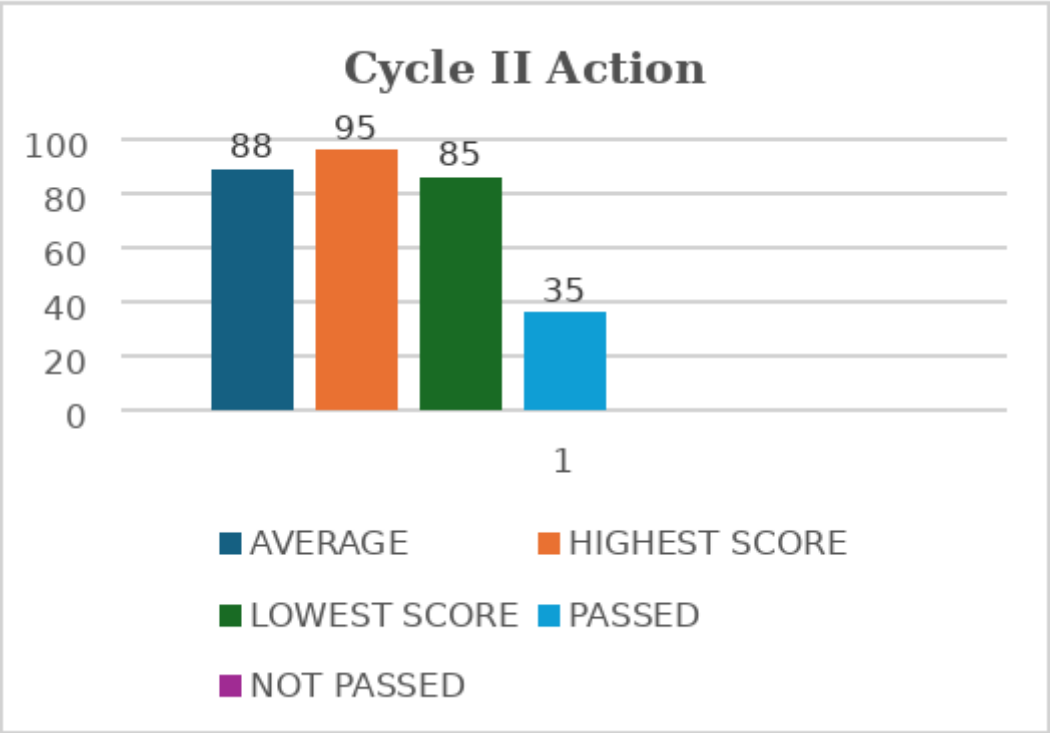

Figure 4. Achievement of Student Learning Motivation Cycle II Action

Source: Wulandari (2025)

The implementation of PTK uses a design framework created by Stephen Kemmis and Mc.Taggart which has four stages, namely the initial stage involving planning, the second stage is the implementation of actions, the third stage focuses on observation, and the fourth stage is reflection. In the first cycle, most of the students showed initial interest in the use of Artsteps media, but there were still some who did not understand how to use it optimally. This can be seen from the low active participation in group discussions and the results of virtual exhibitions that still lack creativity. After making improvements or reflections and refinements during cycle II, there was a significant increase in student enthusiasm involvement, peer-to-peer collaboration, and the quality of projects presented through the artsteps platform. The use of artsteps provides a more interactive and enjoyable learning experience. Through this medium, students have the opportunity to explore and exhibit their artwork in an interactive 3D virtual space. This is in line with the experiential learning approach, which focuses on the active participation of students in learning activities. The use of this interactive technology also opens up opportunities for students to practice learning independently and collaboratively. They are not only required to create artwork, but also design exhibitions digitally, choose themes, arrange virtual rooms, and arrange exhibition narratives. This activity triggers a deeper emotional involvement, sense of responsibility, and creativity of students. These results strengthen evidence from previous research that states that digital media can increase learning motivation if used appropriately in the art learning process (Wibowo, 2021; Lestari, 2020).

The active involvement of students in virtual exhibition activities fosters a sense of pride in their work and strengthens confidence. The results are in accordance with the expected results and set educational goals, as discussed by Istiqomah and Habudin in 2019, this proves that the approach is able to encourage the increase of students' creativity through contextual learning experiences. In addition to supporting the understanding of the material, this method also plays a role in honing students' critical thinking, collaboration, and communication skills effectively during the direct learning process. The increase was significantly seenin the aspect of individual assessment on student learning motivation. Students are able to apply their understanding in the work in the virtual

exhibition both individually and in groups. The creativity of the students in creating virtual exhibition works, the results of their work showed real progress compared to the previous cycle, which was also accompanied by an increase in scores on every aspect of the assessment. Student learning outcomes improve overall after the implementation of this learning model. Stimulus in the form of artsteps examples, group discussions, and individual assignments have a positive impact on students' understanding of the use of the artsteps application. Teachers also provide feedback on an ongoing basis to help students overcome difficulties during the learning process. The results of this learning implementation show that the project-based learning model is effective in achieving learning goals, increasing student participation, and optimizing their creative potential. Therefore, it can be concluded that the application of artsteps media in learning art exhibition materials not only deepens students' understanding of the material, but also has a significant positive impact on increasing learning motivation. These findings show that the integration of technology in cultural arts learning is able to provide a more relevant, meaningful, and appropriate learning experience in accordance with the life context of today's students. This achievement stems from the fact that Artsteps media allows students to express their creativity while creating virtual art exhibitions. As a result, students gain valuable experience and develop a clearer understanding of how to prepare an art exhibition and how to organize the works displayed in the exhibition gallery. Through the use of Artsteps media, students have the opportunity to create a 3D virtual gallery space when planning an art exhibition. When applying Artsteps media in an educational setting, it becomes clear that students have a stronger understanding of the topics covered because the use of Artsteps media allows them to plan art exhibitions according to the guidelines set for organizing the event.

4. Conclusion

Based on the findings of this study, it is suggested that cultural arts teachers integrate digital media such as Artsteps into the fine arts learning process, especially in art exhibition materials. The use of this media can increase students' motivation, creativity, collaboration, and appreciation of artworks. Schools are also expected to provide support through training on technology-based learning media and adequate facilities, such as internet access and computer devices, to support the implementation of digital learning. Future researchers are encouraged to develop this study by involving broader research subjects and exploring other learning models integrated with Artsteps. Students are also expected to be more open to technology-based learning, actively participate in learning activities, and use digital media as a means of expressing creative ideas in the field of art.

Data Availability

The datasets generated during and/or analysed during the current study are available from the corresponding author on reasonable request.

Conflicts of Interest

All authors in this publication declare no conflict of interest regarding the title, data, location, and results of the research.

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Supplementary Materials

This study does not include any supplementary materials.

Declaration on AI Use

The authors declare that no artificial intelligence (AI) or AI-assisted tools were used in the preparation of this manuscript. AI were used only to improve readability and language under strict human oversight; no content, ideas, analyses, or conclusions were generated by AI.

References

Ashshiddiq, M. H., & Darmawan, K. Z. (2022). Artsteps.com sebagai media apresiasi karya foto. In *Bandung Conference Series: Journalism, 2*(2), 111–116. https://doi.org/10.29313/bcsj.v2i2.4466

Asrafzani, A. R., Charis, M., Asrori, A., & Zakaria, G. A. N. (2022). Problem Posing Method In Establishing Students' Creative Thinking Ability In Islamic Education Subjects. *Jurnal At-Tarbiyat: Jurnal Pendidikan Islam*, *5*(3).

Darmadi, D. (2024). Upaya peningkatan motivasi belajar melalui penerapan pembelajaran problem based learning peserta didik kelas IX SMP Negeri 2 Pemulutan Selatan. *Journal on Education, 6*(2), 13582–13600. https://doi.org/10.31004/joe.v6i2.5216

Darudin, D. (2021). Penerapan model pembelajaran kooperatif tipe jigsaw untuk meningkatkan motivasi dan prestasi belajar peserta didik. *Jurnal Ilmiah Teknologi Pendidikan, 11*(2), 1–23. https://doi.org/10.5281/zenodo.4003775

Dewi, A. I., Fitriani, C., Zulnuraini, Z., & Aras, N. F. (2024). Meningkatkan kreatifitas siswa pada mata pelajaran SBdP dengan menggunakan model project based learning (PJBL) di kelas IV SDN 4 Balasaeng Tanjung. *Jurnal Review Pendidikan dan Pengajaran (JRPP), 7*(1), 3121–3126.

Dewi, M. K. (2017). *Upaya meningkatkan motivasi dan hasil belajar ilmu alam melalui model*.

Gusti, G. P., & Rahayuningtyas, W. (2025). Model project based learning dalam kreativitas siswa kelas VIII SMP. *Journal of Language, Literature, and Arts, 5*(1), 1–11. https://doi.org/10.17977/um064v5i12025p1-11

Herliyani, E., Wardana, K. N. H., & Witari, N. N. S. (2022). Pembelajaran artsteps, minat penerapan teknologi pameran online, dan kepuasan mahasiswa dalam berkarya. *Edukasi: Jurnal Pendidikan*, *20*(1), 58-72.

Hidiya, I. (2019). Melalui teknik menggambar kolase bagi peserta didik kelas II SDN 8 Kabila. *Jurnal Normalita, 11*(1), 101–107.

Indayani, M., & Mursalin, E. (2022). Peningkatan motivasi dan hasil belajar siswa melalui penerapan model pembelajaran Co-Op Co-Op. *Jurnal Biology Science & Education, 11*(1), 72–81.

Maliasih, M., & Hartono, H. (2017). Upaya meningkatkan motivasi belajar dan hasil belajar kognitif melalui metode teams games tournaments dengan strategi peta konsep pada siswa SMA. *Jurnal Profesi Keguruan, 3*(2), 222–226.

Maskanah, M. (2016). *Upaya meningkatkan motivasi belajar peserta didik pada mata pelajaran Bahasa Indonesia materi cerita anak dengan metode jigsaw di kelas VI MI NU 14 Pekauman Kendal semester gasal tahun pelajaran 2015/2016*. http://eprints.walisongo.ac.id/5358/1/123911143.pdf

Mukti, R. W. T., & Fathurrahman, M. F. (2023). Pengembangan media pembelajaran Artsteps untuk meningkatkan hasil belajar seni musik. *Jurnal Pendidikan Teknologi Informasi (JUKANTI), 6*(2), 329–341. https://doi.org/10.37792/-jukanti.v6i2.1049

Novianti, N., Maula, L. H., & Amalia, A. R. (2022). Penerapan media pembelajaran takbar untuk meningkatkan motivasi belajar siswa dalam pembelajaran matematika di sekolah dasar. *Jurnal Cendekia: Jurnal Pendidikan Matematika, 6*(2), 1682–1693. https://doi.org/10.31004/cendekia.v6i2.1407

Payadnya, I. P. A. A., Wena, I. M., Noviantari, P. S., Palgunadi, I. M. P. K., & Pradnyanita, A. D. C. (2023). Penerapan media pembelajaran virtual exhibition berbasis RME untuk meningkatkan kemampuan high order thinking skills (HOTS) siswa. *Jurnal Pembelajaran dan Pengembangan Matematika, 3*(1), 39–52. https://doi.org/10.36733/-pemantik.v3i1.6399

Puspawati, G. A. M., Pratama, P. D., & Rahmawati, M. (2024). Upaya meningkatkan motivasi belajar seni rupa peserta didik melalui media Artsteps dalam pembelajaran PJBL di kelas XII IPA 5 SMA Negeri 8 Denpasar. *Realisasi: Ilmu Pendidikan, Seni Rupa dan Desain, 1*(3), 46–57. https://doi.org/10.62383/realisasi.v1i3.165

Setiawan, H., Riandi, R., & Supriatno, B. (2022). Inovasi metode gallery walk pada pembelajaran online dengan aplikasi Artsteps selama pandemi Covid-19. *Asatiza: Jurnal Pendidikan, 3*(2), 78–94. https://doi.org/10.46963/asatiza.v3i2.526

Simanjuntak, M. K., Kesuma, S., & Muslim, Y. (2024). Untuk meningkatkan disiplin belajar pada peserta didik kelas X SMA Negeri 13 Medan. *Consilium: Education and Counseling Journal, 4*(2), 253–258.

Sundari, R., & Rahmalia, D. R. (2022). Artsteps.com: Inovasi pameran virtual karya seni rupa. *Al-Irsyad, 4*(5), 79. https://core.ac.uk/download/pdf/322599509.pdf

Sunnah, S., Buwono, S., & Uliyanti, E. (2021). Peningkatan motivasi belajar siswa dalam pembelajaran ilmu pengetahuan sosial dengan menggunakan metode diskusi. *Jurnal Pendidikan dan Pembelajaran Khatulistiwa, 2*(1), 1–19.

Sunny, V., Sundari, S. F., & Kurniasih, M. (2023). Penerapan model project based learning dengan media konkret untuk meningkatkan hasil belajar matematika kelas V E di SDN Polisi 1 Kota Bogor. *Didaktik: Jurnal Ilmiah PGSD STKIP Subang, 9*(2), 1070–1079. https://doi.org/10.36989/didaktik.v9i2.788

Wulandari, A., Parenrengi, S., & Tune, I. L. (2023). Penerapan model pembelajaran problem based learning untuk meningkatkan motivasi belajar siswa SMK. *Jurnal Pendidikan dan Profesi Keguruan, 2*(2), 225. https://doi.org/10.59562/progresif.v2i2.30424