ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 11| November 2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

THE CONTRIBUTION OF VISUAL REPRESENTATION IN THE LEARNING PROCESS MAINTAINS LEARNERS' ENGAGEMENT AND FOSTERS UNDERSTANDING

Dr. Akshata Sagar Mestry
Assistant Professor, VIVA Institute of Applied Art, Virar, Palghar, Maharashtra

Article DOI: https://doi.org/10.36713/epra32217
DOI No: 10.36713/epra32217

ABSTRACT

The contribution of visual representation in the learning environment is explored in this research. The purpose of this study is to gather empirical evidence in support of the concept that visual representation has a significant role in drawing in young learners (ages 6 to 8) and keeping them engaged throughout the learning process. Furthermore, the study explores developmental differences in this age group to determine the efficacy of visual assistance. Drawing from an extensive study of the literature that includes studies emphasizing the value of incorporating visual components into learning methods that are grounded in experimental research and cognitive frameworks. An experimental approach is adapted for research investigation. The results of the study deepen the understanding of how best practices in education can be achieved through the use of visual representation of the concept , and they also demonstrate how powerful visual aids can engage young students and improve their comprehension and interest in learning. This study presents recommendations to educators on how to skillfully include visual representation into instruction that is adapted to the requirements of students aged 6 to 8 and has the potential to improve learning outcomes.

KEYWORDS: *Visual representation, visual aid, learning process, teaching learning, education, engagement and understanding*

INTRODUCTION

The dynamic nature of education has prompted educators to explore a variety of approaches to engage young learners and promote meaningful comprehension in the search for creative and effective teaching strategies. The incorporation of visual representation has become one of these approaches that is both engaging and promising. It has been shown that visual representation, which includes a variety of visual aids like diagrams, interactive graphics, and pictures, has the ability to fascinate young minds, improve understanding, and maintain interest in the learning process. With a specific focus on children between the ages of 6 and 8, this study aims to investigate the complex effects of visual representation on the educational experience of young learners.

The concept that the early years of school are essential to establishing a strong foundation for future learning serves as the basis for the reasoning behind this research. Early developmental phases are characterized by a natural curiosity and an instinctive attraction toward visual stimuli in young learners. When carefully incorporated into instructional strategies, visual representations may play into students' natural curiosity and create an engaging, dynamic learning environment.

Three key components are at the center of this research: engagement, understanding, and ongoing interest. The first point of interaction between students and learning resources is called engagement, and visual representations have the potential to play a major role in this process. Colorful pictures and interactive media appeal to young minds, and this has the ability to foster heightened involvement.

The second main focus of this research is comprehension, which is the foundation of effective learning. For young learners, visual representation has the power to simplify complicated ideas and make them easier to understand. Abstract concepts can be made concrete and approachable through the use of drawings and pictures, which promotes greater understanding.

Furthermore, a key factor in knowledge retention and general academic achievement is young learners' continued attention throughout the learning process. Through interactive and visually appealing educational resources, visual representation is proposed as an approach for maintaining interest in addition to grabbing attention at first.

The purpose of this research is to find empirical evidence in favor of the theory that visual representation has a major role in attracting the attention of young learners, improving their understanding, and maintaining their interest throughout the learning process. Through analyzing the different aspects of this phenomena, this study aims to provide useful insights that may be used in educational settings as well as to add to the body of knowledge on effective pedagogical techniques. The goal of this study is to provide a thorough knowledge of the function and influence of visual representation in influencing the educational path of learners aged 6 to 8 using a combination of research assessments.

LITERATURE REVIEW

In educational contexts, visual representation which includes a wide range of media like pictures, charts, graphs, and multimedia is essential. This review explores the meaning, applications, and importance of visual representation, highlighting its vital function in promoting understanding, holding students' attention, and enhancing the learning process as a whole.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 11| November 2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

Visual aids can help make concepts more remembered. A study on the psychology of visual aids found the following: The senses of taste (1%), touch (1.5%), smell (3.5%), hearing (11%), logic (3.5%), and sight (83%) account for the remaining percentage of knowledge acquired (Cuban 2001) .

The use of graphical or pictorial elements to communicate information, ideas, or concepts is known as visual representation. By giving students a visual anchor to go along with written or spoken information, it improves communication and comprehension in educational settings (Larkin & Simon, 1987). To accommodate a range of learning styles and preferences, the visual representation can take many different forms, such as dynamic visuals like animations or static visuals like graphical representations. .

Prior studies in education have responded to the conventional concept of learning as a primarily linguistic achievement by focusing on spoken and written texts. Jewitt's study challenges the traditional view of learning as a linguistic achievement by examining the multimodal approach to classroom interaction, focusing on the entire repertoire of meaning-making resources brought by students and teachers, including actional, visual, and linguistic resources, and how they are organized to make meaning. (Jewitt et al., 2014).

The last century's advancements have made visual representation crucial due to the overwhelming amount of data and information traffic. People now require visual representation of information like infographics and data visualization. Visual representation design for communication in education should focus on systematically incorporating information visualization and visual representations to enhance perceptibility, reveal complex patterns, and train designers with necessary qualifications for today's world. (Dur, 2014)

The importance of visual representation in education is underscored by its capacity to make complex information more accessible and memorable. Visuals are processed more quickly than text, enabling learners to grasp information rapidly (Zhang, 2005). The dynamic and interactive nature of visuals captures attention and facilitates engagement, which is particularly crucial in educational settings. Engaging visuals may stimulate interest and encourage students to investigate and learn more about the subject. (Wiles, A. M., 2016)

By presenting visual representations as epistemic objects in education, study refocus on how visualization contributes to knowledge formation from the learners' perspective, despite the existing focus on conceptual understanding in education. Evagorou's study suggests that in teaching subjects, the focus should shift from cognitive understanding to engaging in visualization processes. (Evagorou et al., 2015)

Andrä's study investigates the effects of gesture-based and picture-based learning on primary school children's acquisition of language vocabulary. The results show that gesture and picture enrichment significantly improved children's test performance compared to non-enriched learning. These benefits persisted long after training, for both concrete and abstract words. researcher's findings suggest that pictures enhance children's learning and have robust performance benefits over long timescales.(Andrä et al., 2020)

"Picture or Text First? Explaining Sequence Effects when Learning with Pictures and Text" article discusses the impact of text and picture sequencing on learning outcomes. It suggests that pictures can improve recall and facilitate information, with a recency effect suggesting better recall and a facilitation effect indicating the complexity of the information conveyed. The effectiveness of processing pictures or text depends on the type of assessed knowledge and the complexity of the information conveyed. (Eitel & Scheiter, 2014)

Research contributes to knowledge formation from the learners' perspective, despite the existing focus on conceptual understanding in education. The study suggests that in teaching subjects, the focus should shift from cognitive understanding to engaging in visualization processes.

Curriculum materials and learning environments should create a social and epistemic context, encouraging students to use visualization as evidence, reasoning, experimental procedure, or communication. Teacher education should also address the use of visual representations as epistemic objects. (Evagorou et al., 2015)

Research study analyzes visual representation in learning design,, a field aiming to enhance educational interventions by promoting design and sharing innovative practices among educators. It focuses on three main strands: design representations, methodological approaches, and design tools are important in an educational environment. Based on the learning experience, visual representation as a kind of learning design can be improved in terms of effectiveness and versatility.(Persico, D., & Pozzi, F., 2015).

The literature study highlights the various significance of visual aids in education. Visual representation is a powerful teaching tool that not only helps to make knowledge easier to understand but also plays a critical part in keeping students interested, promoting understanding, and enhancing the learning process as a whole. Understanding the cognitive processes that support the effectiveness of visual aids offers educators significant perspectives on how to best include visual aids into their teaching methods.

PROBLEM STATEMENT

This study aims to explore the effectiveness of visual representation in early childhood education, particularly for learners aged 6-8. Despite its importance, there is a lack of understanding of how visual aids enhance creativity and cognitive development in this age group. The research aims to provide empirical insights for educators and curriculum developers to better integrate visual aids into pedagogical approaches.

OBJECTIVES

- To explore the impact of visual representation on young learners' engagement, comprehension, and interest in early childhood education.
- To evaluate engagement levels, comprehension and retention, attention and interest maintenance, and qualitative student reactions.
- To assess enhancements in the teaching process, focusing on making complex concepts more accessible and fostering interactive discussions.
- To examine teachers' perspectives on visual representation and potential limitations.
- To propose guidelines for integrating visual aids into

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 11| November 2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

teaching practices for children aged 6-8, considering their learning needs.

RESEARCH METHODOLOGY

The research study approaches used experimental, observational, survey-based methods which contribute to the research objectives

This experiment is to assess the effectiveness of visual narratives in aiding the understanding of concepts among 6 to 8-year-old learners in a pre-primary school environment.

INSTRUMENTS AND PROCEDURE

Participants: 50 children from a pre-primary school, ages 6 to 8. Participants should be split into two groups at random: Experimental (25 participants) and Control (25 participants). Educational institutions and educators were asked for permission before allowing their students to participate in the research study.

Experimental Design: Learners who have never been exposed to the specific subjects being covered before. Randomly assigned to place participants in the experimental or control groups.

Preparation: A story that explained the idea in an approachable and entertaining way that is appropriate for the comprehension of children aged six to eight was chosen, along with supporting visuals. Made a control lesson plan that does not include any visual stories and has simple, understandable directions.

Experimental Group (Visual Narrative): Presented the concept to the experimental group through the planned visual narrative. Told the story and show the images to the class, making sure they are interested, interacting, and understanding. To determine understanding, promote discussion and curiosity. converse exercises related to the story to further emphasize the concept.

Control Group (Traditional Instruction): To the control group, explain the same story in plain language without using visual aids. Made use of conventional teaching strategies including dialogue, examples, and vocal explanations.

The study uses face to face questions to gather feedback from students on their engagement, comprehension, and preference for visual narratives in learning. The questions cover topics like enjoyment, understanding, retention, interest, focus, rating visuals compared to regular lessons, and future requests for more visual narrative-based lessons. The structured format allows students to express their opinions in a structured manner.

A questionnaire was conducted to gather feedback from teachers on the use of visual narratives in teaching. The results showed that students understood concepts quickly, maintained interest, and engaged in discussions. The use of visual narratives in the curriculum was found to significantly enhance student learning outcomes, prompting more preparation time for future lessons.

To quantify Teachers' feedback of visual representation in teaching effectiveness, ease of use, and impact on students learning and understanding using a Likert scale.The questionnaire will include 10 statements rated on a 5-point Likert scale (1 = Disagree, 5 = Strongly Agree).

List of questionnaire

- The visual narrative kept students engaged throughout the lecture.
- Students indicated a thorough knowledge of the idea shortly after viewing the visual story.
- During follow-up exercises, participants retained the subject well.
- The visual narrative successfully maintained students' attention and interest.
- The visual narrative simplified the complex idea for young learners.
- The visual narrative sparked discussion among learners.
- Considering the beneficial impact, I am willing to devote more preparation time to future lessons involving visual tales.
- I feel that introducing more visual storytelling into the curriculum would greatly improve student learning results.

RESULTS AND FINDINGS

Given tests to both groups to assess comprehension and memory of what was discussed. This could involve vocal explanations, drawing assignments, and quizzes. By analyzing the performance of the experimental and control groups, assess how effective the visual narrative was.

The visual narrative was rated as interesting by teachers on average, with a mean engagement score of 4.2, according to quantitative studies. Furthermore, a favorable effect on students' comprehension and memory retention was indicated by the mean comprehension and retention rating, which was computed as 4.4.

Engagement Level: The mean score for the level of engagement with the narrative's visuals was 5, on a scale of 1 to 5. This suggests that the visual representation of the story was successful in holding the students' interest during the entire lecture and encouraging engagement and conversation.

Comprehension and Retention: On a scale of 1 to 5, the mean score for students' understanding and retention was 4. This implies that most of the students showed an understanding of the concept quickly after viewing the visual representation of the story. During follow-up activities, retention was generally strong, but some students needed more encouragement.

Maintenance of Attention and Interest: An overwhelming "Yes" was given in response to the question of whether or not the visual story helped to keep students' interest and attention. Students stayed focused and engaged in the lesson the entire time because of the visual representation 's ability to maintain attention and stimulate interest in the subject.

Teachers noted in their qualitative observations that students showed greater passion and attentiveness in response to the visual narrative. However, some pointed up difficulties with pace or details. Responses to the visual Representation's effect were mixed; most noted that it could boost engagement

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 11| November 2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

but occasionally had trouble connecting images to conceptual understanding.

Student Reactions: Particular observations on how students responded to the visual representation of the concept drew out the obvious joy. Students were seen pointing excitedly at images and drawing links between them and the subject. Students' enthusiastic post-narrative discussions and facial expressions revealed a profound understanding and enthusiasm.

Enhancements in Teaching Process: The qualitative feedback revealed that the visual representation improved the teaching process significantly. It was successful in encouraging student discussion by breaking down a difficult idea for younger learners. It was observed, however, that in comparison with traditional techniques, this method required additional preparation time.

Advantages of Incorporating Visual Representation: Teachers stated that they thought adding more visual representation of the topic to the curriculum could have some advantages. They underlined how effective visual representations are at drawing in young students and encouraging greater understanding of complex concepts. Everyone agreed that including more images in the curriculum might greatly improve the learning outcomes for students.

In summary, the utilization of the Experimental method in combination with both quantitative and qualitative data indicates the importance of visual representations in terms of student engagement, understanding, and retention of learning. While there were certain difficulties, such as requiring more time for preparation, the overall beneficial effect on student learning outcomes suggests that this can be a useful addition to the teaching aid, particularly for students aged 6 to 8.

LIMITATIONS

There are several limitations to the study on the beneficial effects of visual narratives on the learning experiences of learners aged 6 to 8 years old. These include the study's focus on a pre primary environment, its limited generalizability, its small sample size of 50 students, its short duration, and the subjectivity of some of the qualitative findings. Additionally, it overlooks the impact of certain teacher viewpoints and the long-term effects of visual representation.

FUTURE SCOPE

It could serve as the goal of future research projects to overcome the noted limitations and broaden the field's expertise. The generalizability of results would be improved by doing comparable studies with bigger and more varied samples in a variety of educational contexts. The long-term effects of visual narratives on students' academic performance and attitudes toward learning could be investigated through longitudinal research. A more comprehensive understanding would also result from examining the possible impact of individual characteristics, such as learning styles or cognitive abilities, on the efficacy of visual representation.

RECOMMENDATION

Several recommendations are made in light of the research's findings. To maximize their effectiveness, instructors should first be encouraged to receive training in creating and implementing powerful visual representation in the classroom. Policymakers in education may want to think about including instructions or materials for incorporating visual representation into the curriculum. Moreover, the creation of digital tools or platforms designed especially for the purpose of producing instructional visual representation may enable their widespread application.

CONCLUSION

Extensive research on the effectiveness of using visual narratives in the learning environment for students aged 6 to 8 produced informative results that illustrated the potential advantages of this novel approach. A thorough understanding of the effects of visual representation on student engagement, comprehension, and overall learning outcomes is made possible by the integration of quantitative and qualitative data from the experimental method.

According to quantitative study, teachers rated the visual narrative as interesting for students on average, with a mean rating of 4.2. A favorable impact on students comprehension and memory retention was further demonstrated by the mean comprehension and retention rating of 4.4. Furthermore, throughout visual narrative sessions, good student reactions, increased interest, and attention were highlighted by the teachers' qualitative observations.

At a mean score of 5 on a 1–5 scale, the engagement level confirmed that the visual narrative had successfully drawn students' attention and encouraged debate and active participation. Comparably, a strong first understanding was indicated by the comprehension and retention grade of 4 on a 1–5 scale, and retention remained high overall during follow-up activities.

Qualitative observations also highlighted students' obvious interest, which was demonstrated by their interactions with visuals and post-narrative discussions. Educators observed notable improvements in the learning process because the visual representation simplified difficult ideas and sparked insightful student discussions. Teachers indicated confidence in the potential advantages of adding more visual representations to the curriculum to improve student learning results, despite some challenges including longer preparation times.

The research study concludes with strong evidence that the use of visual representations is essential for retaining students' attention in the learning process, encouraging comprehension in young learners, and engaging them. Given the positive impact they have on student learning outcomes, which are supported by both quantitative and qualitative data, visual representations need to be seen as an invaluable addition to the teaching toolkit, particularly when it comes to learners who are between the ages of six and eight. The use of visually stimulating methods may open the door to more efficient and joyful learning environments as education advances.

ISSN (Online): 2455-3662
EPRA International Journal of Multidisciplinary Research (IJMR) - Peer Reviewed Journal
Volume: 12| Issue: 11| November 2026|| Journal DOI: 10.36713/epra2013 || SJIF Impact Factor 2026: 8.753 || ISI Value: 1.188

REFERENCES

1. *Andrä, C., Mathias, B., Schwager, A., Macedonia, M., & Von Kriegstein, K. (2020). Learning Foreign Language Vocabulary with Gestures and Pictures Enhances Vocabulary Memory for Several Months Post-Learning in Eight-Year-Old School Children. Educational Psychology Review, 32(3), 815–850. https://doi.org/10.1007/s10648-020-09527-z*
2. *Cuban, L. (2001). Computers in the Classroom, Cambridge, M.A. Harvard University Press. Retrieved from http://www.webpages.uidaho.edu/mbolin/akerele-afolable.html*
3. *Dur, B. İ. U. (2014). Data visualization and infographics in Visual Communication Design Education at the Age of Information. Journal of Arts and Humanities, 3(5), 39–50. https://doi.org/10.18533/journal.v3i5.460*
4. *Eitel, A., & Scheiter, K. (2014). Picture or Text First? Explaining Sequence Effects when Learning with Pictures and Text. Educational Psychology Review, 27(1), 153–180. https://doi.org/10.1007/s10648-014-9264-4*
5. *Evagorou, M., Erduran, S., & Mäntylä, T. (2015). The role of visual representations in scientific practices: from conceptual understanding and knowledge generation to 'seeing' how science works. International Journal of STEM Education, 2(1). https://doi.org/10.1186/s40594-015-0024-x*
6. *Jewitt, C., Kress, G., Ogborn, J., & Tsatsarelis, C. (2014). Multimodal Teaching and Learning : The Rhetorics of the Science Classroom. https://doi.org/10.5040/9781472593764*
7. *Larkin, J., & Simon, H. (1987). Why a Diagram is (Sometimes) Worth Ten Thousand Words. Cognitive Science, 11(1), 65–100. https://doi.org/10.1016/s0364-0213(87)80026-5*
8. *Persico, D., & Pozzi, F. (2015). Informing learning design with learning analytics to improve teacher inquiry. British Journal of Educational Technology, 46(2), 230–248. doi: 10.1111/bjet.12207*
9. *Wiles, A. M. (2016). Figure analysis: A teaching technique to promote visual literacy and active Learning. Biochemistry and Molecular Biology Education, 44(4), 336–344. https://doi.org/10.1002/bmb.20953*
10. *Zhang, D. (2005). Interactive Multimedia-Based E-Learning: A Study of Effectiveness. American Journal of Distance Education, 19(3), 149–162. https://doi.org/10.1207/s15389286ajde1903_3*