

## **Dioramas as Multimodal Instructional Media in English Language Education: A Literature Review**

<sup>1</sup>Wenda M. Kakerissa, <sup>2</sup>Fredi Meyer

<sup>1</sup>*Universitas Pattimura*

Corresponding email: [wendakakerissa@upi.edu](mailto:wendakakerissa@upi.edu)

<sup>2</sup>*PSDKU MBD Universitas Pattimura*

email: [fredimeyer28822@gmail.com](mailto:fredimeyer28822@gmail.com)

### **ABSTRACT**

In the domain of learning English as a foreign language, there are ongoing discussions regarding the effectiveness of visual learning media in developing contextual and meaningful language skills. This study presents Jewitt and Mayer's multimodal learning theory, Kolb's experiential learning theory, and project-based learning approaches as analytical frameworks for exploring the role of dioramas in language instruction. The three theories emphasize that learning experiences are enhanced when students engage through multiple channels of representation (visual, linguistic, spatial) and actively participate in creating meaning through collaborative projects. An extensive review of the literature from the past five years indicates that dioramas effectively enhance contextual vocabulary acquisition, improve both oral and written language production, foster critical thinking, and promote cultural awareness. Dioramas are recognized as effective and practical tools that can be employed across various educational levels and are adaptable to advancements in technology. Theoretical implications indicate that the use of dioramas as a pedagogical method in English language education can be effective when thoughtfully integrated into the curriculum, supported by comprehensive teacher training, and supplemented with pertinent guides addressing both local and global issues.

**Keywords:** *Diorama, English language education, multimodal learning, project-based learning, literature review*

### **INTRODUCTION**

In the dynamic landscape of 21st-century education, the demand for pedagogical approaches that promote active engagement, contextual understanding, and critical thinking has intensified. Within this paradigm, dioramas—whether physical or digital—have emerged as multimodal instructional media that integrate visual, narrative, spatial, and interactive elements to enhance both visual and verbal literacies (Jewitt, 2008). Originally rooted in museology and scientific display, dioramas are increasingly utilized in English language education as effective tools for fostering contextual comprehension, vocabulary acquisition, and expressive fluency. Their design aligns with experiential learning theory (Kolb, 1984), multimodal literacy frameworks (Jewitt, 2008), and Swain's (2000) output hypothesis, which emphasizes language mastery through meaningful production and real-world interaction.

Empirical studies affirm the pedagogical value of diorama-based learning. Ulusoy and Rihter (2018) noted significant improvements in students' narrative construction, while Dewi,

As'ari, and Zuhra (2023) demonstrated that digital dioramas substantially elevated learners' speaking proficiency. Similarly, Dogan (2021) found that immersive, project-based engagement through dioramas enhanced student motivation and social interaction. These findings underscore the diorama's role as both a visual scaffold and a collaborative learning platform that connects linguistic theory with practical application. The medium facilitates direct experience, supports social negotiation of meaning, and provides opportunities for learners to articulate and reflect on their creative processes.

Beyond language fluency, dioramas assist learners in visualizing abstract concepts, allowing them to connect new linguistic knowledge to prior understanding. Mayer's (2014) cognitive theory of multimedia learning explains that such multimodal integration enhances retention and transfer. Consequently, dioramas function as meaning-making spaces where learners synthesize linguistic, cognitive, and affective dimensions. They also serve as authentic assessment tools, enabling educators to evaluate students' performance holistically—encompassing creativity, critical thinking, and communicative competence (F. Nasution & Anas, 2024). This holistic potential situates dioramas as transformative educational instruments capable of reshaping language learning into an engaging and meaningful experience.

However, despite these advantages, current scholarship reveals notable gaps. Most studies on diorama use are confined to science and social studies, leaving the English language domain relatively underexplored. Research integrating physical and digital diorama modalities remains fragmented, with limited discussion on their combined effects on language literacy and multimodal communication. Additionally, few works have systematically linked diorama-based instruction to theoretical models such as ADDIE or Project-Based Learning (Farikhatin et al., 2024; A. Qadri et al., 2024). This lack of comprehensive synthesis underscores the need for a structured examination of dioramas as pedagogical media within English as a Foreign Language (EFL) contexts.

Against this backdrop, the present literature review aims to consolidate theoretical perspectives and empirical findings concerning the role and application of dioramas in English language education. Anchored in Multimodal Learning Theory (Jewitt, 2008; Mayer, 2014), Experiential Learning Theory (Kolb, 1984), and Project-Based Learning frameworks, this study situates the diorama not merely as an instructional aid but as a multimodal ecosystem that fosters contextual, collaborative, and creative learning. By synthesizing existing scholarship, the review aspires to articulate the educational significance of dioramas and to provide a conceptual foundation for future research and curricular innovation in contemporary language classrooms.

## **DISCUSSION**

### ***Understanding Dioramas: Definition and Characteristics***

A diorama is a three-dimensional representation that depicts a particular scene in real time, complete with specific figures, backgrounds, and contexts. In the context of education and museology, dioramas are used as a visual medium that not only depicts an object or event, but also builds a deep understanding of the context that underlies it. Hutterer and Kamcke (2015) explain that dioramas do not simply present objects visually, but create a spatial illusion that allows observers to feel “present” in the scene. This is achieved through a technique of combining real three-dimensional objects, two-dimensional painted backgrounds, and directional lighting arrangements.

In general, dioramas are characterized by panoramic painted backgrounds, the use of real objects such as dolls, human replicas, or animals (sometimes taxidermy), and spatial arrangements that guide visitors' perceptions to focus on one point of view. This characteristic is very distinctive, especially in habitat dioramas that develop in natural history museums. According to Patton (2015), the main components of a diorama include background elements, middle ground elements, and foreground elements, which are arranged in such a way as to create depth of space and strong visual continuity. In learning, dioramas are a medium that is not only visually appealing but also pedagogically effective. As an educational medium, dioramas facilitate students to understand complex concepts in concrete visual forms.

Ulusoy and Rihter (2018) noted that dioramas can expand students' multimodal expressions, especially in the context of cross-cultural learning and strengthening visual literacy. In addition, Dewi, As'ari, and Zuhra (2023) in their study showed that the use of digital dioramas in English learning can significantly improve students' speaking skills. This shows that dioramas, both in conventional and digital forms, remain relevant in supporting communicative and contextual language learning.

In the field of creative learning, diorama production gives an opportunity for students to acquire critical thinking abilities, problem solving, and aesthetic creativity. Dogan (2021) stated that diorama projects might increase teamwork and communication between students, because they have to design, modify ideas, and convey them together. Through this process one can also develop affective qualities including empathy, environmental concern, and social responsibility. Diorama projects also fit constructivist and experiential learning theories, which are supposed to boost students' active involvement in the course of instruction (Kolb, 1984).

In English language learning, dioramas provide students with authentic contexts that can stimulate spoken and written language production. Swain (2000) in his output hypothesis states that learners who are encouraged to produce language in meaningful contexts will master new structures and vocabulary more quickly. By describing the dioramas they create, students are encouraged to construct sentences, use expressions, and practice communication in semi-real situations that are more linguistically challenging.

The forms of dioramas are currently also increasingly developing, especially through the integration of digital technology. The use of graphic design applications, augmented reality (AR), and virtual reality (VR) expands the function of dioramas as interactive learning media. According to Harris (2017), VR-based dioramas can provide an immersive experience that is not only interesting but also deepens understanding of concepts through multisensory involvement. This digital transformation makes dioramas more flexible and adaptive to the needs of the 21st century generation of learners.

### ***History and Development of Dioramas***

The evolution of dioramas mirrors humanity's ongoing pursuit to visualize, interpret, and communicate reality through artistic and educational means. The term *diorama* was first introduced in early 19th-century Paris by Louis Daguerre and Charles Marie Bouton, who combined transparent paintings with dynamic lighting to simulate shifts in time and weather, merging art, optics, and narrative into an immersive spectacle (Hutterer & Kamcke, 2015). This innovation inspired subsequent visualization forms such as panoramas, georamas, and cosmoramas, which captivated European audiences by offering spectacular views of distant worlds

(Tunnicliffe & Scheersoi, 2015). These developments gradually transitioned into educational contexts, especially museums, where dioramas became tools for public learning and engagement.

By the late 19th century, natural history museums had institutionalized dioramas as central instruments for science communication. Carl Akeley's habitat dioramas at the American Museum of Natural History exemplified the fusion of scientific accuracy and artistic realism, transforming static displays into immersive educational environments (Tunnicliffe & Scheersoi, 2015). Such works also advanced conservation awareness, as seen in the Biological Museum of Stockholm, where detailed ecological scenes fostered understanding of biodiversity (Hutterer & Kamcke, 2015).

In the 20th century, dioramas extended into military and political spheres, visualizing battles and strategies during the world wars (Bennett, 1995; Beil, 2018). However, the 21st century has redefined their role within education. Under constructivist and experiential learning paradigms (Kolb, 1984), dioramas evolved into participatory, reflective learning media. With digital integration, they now transcend physical boundaries—emerging as interactive, sustainable, and creative learning platforms that blend technology, collaboration, and critical thinking (Ibanez, 2023).

### ***Educational Function of Dioramas in General Learning***

As multimodal learning media that integrate visual, spatial, and narrative elements, dioramas contribute significantly to enhancing students' overall learning quality. Beyond aiding comprehension, they foster creativity, communication, collaboration, and aesthetic appreciation—competencies essential for 21st-century education. Synthesizing prior empirical evidence, eight key educational functions of dioramas can be identified.

#### **1. Concrete understanding of abstract concepts**

Dioramas transform abstract or theoretical content into tangible, visual representations that promote conceptual clarity and contextual understanding. By linking ideas to observable realities, they bridge the gap between theory and experience. Khaeroni and Julia (2024) demonstrated that dioramas improved students' grasp of scientific ideas through concrete visualization, while Efe (2017) noted that learners more effectively connected theory with observation. This multisensory engagement aligns with Mayer's (2014) cognitive theory, which asserts that multimodal learning strengthens retention and reduces misconceptions.

#### **2. Project-based collaborative learning**

Dioramas align naturally with project-based learning models, requiring teamwork in designing, constructing, and presenting a shared creation. Such projects stimulate discussion, negotiation, and role distribution, cultivating both academic and social growth. Farikhatin, Subekti, and Hanum (2024) found that diorama-based projects enhanced cooperation, accountability, and motivation. Similarly, Ekowati et al. (2024) integrated dioramas within the STAD-PjBL framework, where assessment extended beyond final products to team dynamics and problem-solving, thus nurturing emotional intelligence and collaboration.

#### **3. Development of visual and artistic creativity**

Through the design process, dioramas encourage students to express understanding via aesthetic and visual storytelling. The interplay of color, texture, and spatial design fosters visual literacy and creative thinking. Bali and Zahroh (2023) revealed that students engaged in diorama-making developed innovative visual narratives and abstract conceptualization skills. The process also serves as a medium for self-reflection, enabling learners to merge cognitive and imaginative capacities into personally meaningful expressions.

#### **4. Increased enthusiasm and intrinsic motivation**

Hands-on participation in diorama creation fosters ownership and emotional engagement, elevating intrinsic motivation. Qadri, Yoenanto, and Fardana (2024) found that diorama-based learning particularly benefits visual and kinesthetic learners, boosting confidence and classroom participation. As Harris (2017) emphasized, emotional investment in creative tasks enhances persistence and curiosity—key drivers of lifelong learning. This sense of agency transforms the learning process into a personally rewarding and self-directed endeavor.

#### **5. Strengthening early childhood language skills**

In early childhood education, dioramas serve as visual stimuli that naturally elicit verbal expression. Kustiawan (2017) observed that children improved naming, sentence construction, and spontaneous communication while interacting with thematic dioramas. These interactions encourage both receptive and expressive language growth through storytelling, questioning, and role play. Teachers, acting as facilitators, can guide these exchanges to strengthen children's confidence and narrative competence in authentic contexts of play.

#### **6. Improvement in general learning outcomes**

Empirical studies show that diorama-based instruction yields higher learning outcomes across disciplines. Kaniaazahrri et al. (2024) found that students using dioramas in science achieved superior results compared to traditional methods, as they were more actively engaged in meaning-making. Learning through dioramas involves construction, reflection, and interpretation—core processes in experiential learning. As a result, knowledge becomes internalized through personal and collaborative discovery rather than rote memorization.

#### **7. Authentic assessment and multimodal representation**

Dioramas offer teachers a multidimensional assessment platform that captures both process and product. They allow evaluation of critical thinking, teamwork, creativity, and communication within a single project. Nasution and Anas (2024) demonstrated this through the “Diosir” project, which provided comprehensive insight into students' cognitive and social competencies. The integration of images, text, motion, and oral explanation supports multimodal representation, aligning with modern educational priorities emphasizing creativity, communication, and collaboration as key learning outcomes.

#### **8. Strengthening character values and social empathy**

Collaborative diorama projects nurture essential character traits such as empathy, tolerance, and responsibility. Rusdi et al. (2022) found that creating dioramas depicting cultural



diversity encouraged students to appreciate differences and resolve conflicts constructively. By representing varied traditions and lifestyles, learners engage in perspective-taking that fosters social awareness and inclusivity. Such experiences embody the spirit of character education, which values moral and civic growth alongside academic achievement.

Collectively, these eight functions illustrate how dioramas operate as comprehensive educational media—merging cognitive, emotional, social, and aesthetic dimensions. They not only enhance comprehension and creativity but also instill cooperation, empathy, and intrinsic motivation. As a pedagogical tool, the diorama exemplifies experiential, project-based, and multimodal learning, supporting the holistic development required in contemporary education systems. This broad educational significance forms the conceptual bridge to exploring how dioramas specifically advance linguistic competence, multimodal literacy, and cultural awareness in English language education.

### ***The Role of Dioramas in Language Education***

In language education, mastering communication skills and cultural understanding demands approaches that transcend text-based instruction. Effective learning requires integrating cognitive, affective, and social dimensions in contextual and multimodal ways. Dioramas—whether tangible or digital—bridge linguistic theory and authentic practice, supporting learners in expressing meaning through both visual and verbal channels. Based on recent empirical findings, six central roles of dioramas in language education can be identified.

#### **1. Contextualization of vocabulary and language structure**

Dioramas situate vocabulary and grammar within meaningful, observable contexts. Widiastuty et al. (2024) demonstrated that students learning through “market scene” dioramas improved their mastery of vocabulary and expressions for everyday communication such as “*How much is it?*” or “*Here you are.*” The “My Classroom” diorama used in Yogyakarta schools also enabled students to understand prepositional phrases like “*next to the window*” or “*behind the door.*” These contextual visuals enhance comprehension by connecting linguistic input to concrete referents—aligning with Mayer’s (2014) dual-channel learning model. Moreover, Swain’s (2000) output hypothesis underscores the importance of producing language in meaningful contexts; dioramas naturally generate these communicative situations, prompting learners to use structures and vocabulary more accurately and confidently.

#### **2. Scaffolding for oral and written language production**

Serving as cognitive scaffolds, dioramas support learners’ oral and written language construction. Dewi, As’ari, and Zuhra (2023) found that university students using digital dioramas to narrate personal spaces achieved higher speaking fluency, as the visuals reduced cognitive load and encouraged coherent expression. At the elementary level, visualizing story scenes through diorama creation improved narrative writing ability by linking visual design, storytelling, and text production. Ulusoy and Rihter (2018) emphasized that such

multimodal representation deepens the link between ideas, structures, and expression. This integrative process fosters linguistic fluency, textual organization, and grammatical awareness, transforming dioramas into multidimensional tools for language output.

### **3. Strengthening critical and creative thinking skills**

Designing dioramas demands analytical thinking, synthesis, and creativity. In the “Diosir” project, Nasution and Anas (2024) reported an 82% improvement in students’ critical thinking after constructing dioramas of the water cycle, as learners evaluated both scientific and linguistic meaning. Similarly, Farikhatin et al. (2024) noted that project-based diorama learning nurtured problem-solving and independent thinking. Within language education, such processes train students to interpret meaning, evaluate discourse, and construct arguments—skills integral to critical literacy. Dioramas thus cultivate higher-order thinking by requiring learners to organize content visually and linguistically while maintaining coherence and communicative intent.

### **4. Building cultural awareness and social empathy**

Through representing stories, traditions, and social symbols, dioramas immerse learners in diverse cultural perspectives. Deska and Misnar (2023) showed that an Acehese folklore diorama project heightened cross-cultural awareness and pride in local identity. Likewise, Ulusoy and Rihter (2018) found that Turkish students creating folk-tale dioramas became more adept at comparing cultural values and empathizing with characters. This process transforms language learning into cultural exploration—students interpret conflicts, moral lessons, and traditions from multiple viewpoints. By visualizing diversity, dioramas serve as experiential tools for cultivating empathy, tolerance, and intercultural sensitivity, aligning with global citizenship education.

### **5. Strengthening collaboration and affective engagement**

Because diorama-making is inherently collaborative, it builds interpersonal and emotional competencies. Dogan (2021) observed that group diorama projects improved communication, teamwork, and empathy among elementary students. Widiastuty et al. (2024) further documented a 33-point rise in participation following diorama-based group discussions, highlighting increased motivation and ownership. Working collectively to plan, build, and present visual narratives fosters responsibility, open-mindedness, and perseverance—traits essential to communicative success in language learning. Emotional engagement derived from seeing one’s creation displayed also enhances pride and long-term motivation, reinforcing the social dimension of language use.

### **6. Strengthening visual and multimodal literacy**

In contemporary language education, meaning extends beyond words. Dioramas train students to interpret and produce messages that combine image, space, and text. Jewitt (2008) emphasized that literacy today is multimodal—students must decode visual and spatial cues as part of communication. Harris (2017) demonstrated that AR-based dioramas enhance learners’ sensitivity to nonverbal symbols, such as interpreting tone through color, positioning, or gesture. This multimodal awareness strengthens semantic understanding,

enabling students to “read” meaning in context and translate it into coherent linguistic output. Writing or retelling stories based on dioramas also integrates visual analysis with narrative construction, developing advanced interpretive and expressive literacy.

Collectively, these six roles highlight dioramas as transformative media in language education. They integrate linguistic learning with cultural, social, and visual dimensions—fostering critical, creative, and empathetic communicators. By situating language in concrete, multimodal, and collaborative experiences, dioramas bridge the gap between classroom learning and real-world communication. The next section will illustrate concrete implementations of these principles in English language learning at various educational levels.

### ***Examples of Diorama Implementation in English Language Learning***

The use of dioramas in English language classrooms has evolved into a dynamic and interactive pedagogy that links language acquisition with creativity, collaboration, and contextual learning. From elementary to tertiary education, these implementations reveal that dioramas are not mere visual aids but catalysts for deeper linguistic and cognitive engagement.

#### ***1. Mini market simulation for food vocabulary mastery***

At the elementary level, dioramas are effectively utilized to contextualize everyday language functions. In the mini market simulation at Fathul Jannah Elementary School, students learned food-related vocabulary through role-play as sellers and buyers (Widiastuty et al., 2024). The tactile and visual experience made abstract linguistic elements tangible. This project not only improved pronunciation accuracy and vocabulary recall but also encouraged spontaneous communication. The playful setting reduced anxiety and fostered authentic language interaction, proving that learning environments grounded in realism enhance vocabulary retention.

#### ***2. Digital diorama presentation with powerpoint 3D***

At the university level, dioramas have been integrated with digital tools to foster multimodal expression. Dewi, As'ari, and Zuhra (2023) implemented 3D PowerPoint dioramas in a Speaking course, where students described virtual living spaces using accurate spatial expressions. The project led to notable gains in fluency and confidence as students felt supported by self-designed visuals. This digital adaptation of dioramas not only modernizes classroom practice but also aligns with 21st-century literacies, combining visual communication, linguistic precision, and technological competence.

#### ***3. Visualization of the school environment for prepositions of place***

For middle school learners, the use of miniature school dioramas provides a concrete framework for spatial prepositions. Deska and Misnar (2023) showed how students internalized prepositions such as “behind” and “next to” through guided tours of a model school. Acting as tour guides, students practiced sequencing and descriptive language while maintaining interactional flow. The tangible spatial layout of the diorama helped learners



anchor linguistic forms to real-world meanings, effectively bridging grammar instruction with communicative use.

**4. *Drama scene representation for literary interpretation***

In high school settings, dioramas have proven valuable for literary engagement. Students reconstructed pivotal scenes from *Romeo and Juliet*, analyzing symbols, conflicts, and cultural nuances embedded in the text. By visually interpreting literature, learners move beyond rote memorization toward analytical reading and expressive speaking. The activity transformed the classroom into a performative space where literature came alive through both verbal and visual storytelling, reinforcing interpretative depth and aesthetic appreciation.

**5. *Fable narration in writing and diorama projects***

An integrative writing–visualization approach emerges in fable diorama projects. Students compose original English fables, select significant scenes, and represent them using recyclable materials. Dewi et al. (2023) observed that this cycle of writing, building, and narrating deepens understanding of cohesion, plot structure, and moral themes. The process nurtures ecological awareness alongside linguistic creativity. Dioramas, in this sense, transform literacy learning into a sustainable, multimodal, and emotionally resonant experience.

**6. *Representation of the water cycle in integrated learning***

Nasution and Anas (2024) illustrate how dioramas function in bilingual science–English integration. Students constructed models of the water cycle and explained each stage in English, combining scientific content with language output. The project heightened scientific comprehension while reinforcing sequential discourse markers like “first,” “then,” and “finally.” By merging cognitive and linguistic objectives, this project embodies the principles of Content-Based Instruction (CBI) and demonstrates how dioramas can operationalize cross-disciplinary learning.

**7. *Folklore diorama as multilingual learning***

In multicultural contexts, folklore dioramas bridge local culture and global communication. At SMP Takengon, students visualized the Acehnese folktale *Putroe Nahrasyiah* through bilingual narration (Deska & Misnar, 2023). The project fostered cross-linguistic transfer and intercultural empathy, empowering students to take pride in their linguistic heritage while mastering English expression. The diorama thus becomes a site of linguistic pluralism, where students negotiate meaning between languages and cultures through narrative and art.

**8. *Alternative assessment for visual-kinesthetic learning styles***

Finally, dioramas offer inclusive alternatives for assessment, especially for students who struggle with conventional written tests. Through hands-on creation and oral explanation, learners demonstrate comprehension, vocabulary mastery, and speaking fluency in a stress-free context (Nasution & Anas, 2024). This practice accommodates visual and kinesthetic learning preferences and acknowledges the diversity of student intelligences. It transforms

assessment from an evaluative act into an expressive, student-centered experience that values creativity as evidence of learning.

In essence, these eight implementations reveal how dioramas operate as transformative media across learning levels. They merge language with visual art, local culture, and technology—turning passive classrooms into participatory environments. By fostering linguistic accuracy, cultural awareness, and multimodal literacy, dioramas redefine the boundaries of English language education, making learning not only effective but also imaginative, inclusive, and deeply human.

### ***Review of Validity and Practicality of Diorama Media in Literature***

The literature consistently affirms that diorama media demonstrate both strong validity and high practicality within educational settings. Studies such as those by Wijaya and Mustika (2022) and Farikhatin, Subekti, and Hanum (2024) show that dioramas meet essential pedagogical standards, receiving excellent validation scores from media and material experts while being deemed efficient and easy to implement by teachers and students. Developed through systematic models like ADDIE, dioramas effectively integrate content, design, and user needs. Their tangible and adaptable nature makes them accessible even in schools with limited technological resources, providing inclusive learning experiences that balance academic rigor and creative engagement.

Equally important, dioramas have proven flexible and sustainable across disciplines. Qadri et al. (2024) and Widiastuty et al. (2024) noted their easy replicability, low cost, and adaptability for hybrid learning modes. Even when challenges such as storage or repetitive themes arise, these are manageable through structured support and thematic variation. Overall, the literature reinforces that dioramas embody valid, practical, and scalable media—bridging traditional learning with modern educational innovation.

### **CONCLUSION**

Based on the synthesis of the literature that has been studied, it can be inferred that diorama is a successful, adaptive, and transformative learning medium in the context of language teaching, especially English as a foreign language. Its multimodal feature helps students to develop language abilities in an integrated manner—from vocabulary, sentence structure, story, to cultural expression—in one contextual and immersive learning experience.

The merits of diorama lie not only in its potency as a visual depiction, but also in its potential to enhance students' affective, collaborative, and reflective involvement. The educational functions supplied include increasing critical thinking, visual creativity, social cooperation, to visual and verbal literacy simultaneously. Various instances of application indicate that diorama may be utilized flexibly at various levels of education and learning themes, both in physical and digital formats.

Furthermore, a survey of media development literature reveals that diorama has a high level of validity and practicality, with simplicity of adaption, low cost, and significant visual appeal. Thus, diorama is deserving of continuing development as a vital aspect of project-based language learning methodologies and 21st-century literacy.

## REFERENCES

- Al Qadri, A. R., Yoenanto, N. H., & Fardana, N. A. (2024). Efektivitas penggunaan media diorama pada peserta didik sekolah dasar. *Jurnal Ilmiah Ilmu Pendidikan*, 7(10), 11324–11332.
- Bali, M. M. I., & Zahroh, S. (2023). The development of diorama learning media to improve students' creativity in science subjects. *Proceedings of the 6th International Conference on Education and Social Science Research (ICESRE 2023)*, 867–875. [https://doi.org/10.2991/978-2-38476-096-1\\_94](https://doi.org/10.2991/978-2-38476-096-1_94)
- Beil, C. (2018). 269War Exhibitions: Forms of Presentation of the World War for the Homeland Front. In G. P. Gross & J. W. Ancker (Eds.), *The Forgotten Front: The Eastern Theater of World War I, 1914 - 1915* (p. 0). University Press of Kentucky. <https://doi.org/10.5810/kentucky/9780813175416.003.0017>
- Deska, N. A., & Misnar. (2023). The implementation of diorama media to improve students' speaking abilities. *Journal of English Education and Social Science*, 3(2), 49–62.
- Deska, S., & Misnar, M. (2023). Implementasi pembelajaran berbasis proyek melalui diorama cerita rakyat dalam menanamkan nilai-nilai karakter. *Jurnal Pendidikan Dan Pembelajaran Khatulistiwa*, 12(3), 1–9. <https://doi.org/10.26418/jppk.v12i3.71232>
- Dewi, S. L., As'ari, C., & Zuhra, I. (2023). The effect of using digital diorama on students' speaking skill performance. *Jurnal Ilmiah Global Education*, 4(1), 78–87. <https://doi.org/10.55681/jige.v4i1.545>
- Dewi, Y. R., As'ari, A. R., & Zuhra, S. (2023). PowerPoint-based diorama project to enhance students' speaking ability. *JEELS (Journal of English Education and Linguistics Studies)*, 10(1), 23–45. <https://doi.org/10.30762/jeels.v10i1.581>
- Dogan, A. (2021). The effect of diorama-assisted science activities on elementary students' science achievement and scientific process skills. *Journal of Education and Learning*, 10(2), 11–21. <https://doi.org/10.5539/jel.v10n2p11>
- Dogan, Y. (2021). Diorama projects as a tool for enhancing communication and cooperation among primary school students. *Education and Science*, 46(207), 275–290.
- Efe, R. (2017). The use of dioramas in science education: The effect on student achievement and attitudes. *European Journal of Educational Research*, 6(3), 273–283. <https://doi.org/10.12973/eu-jer.6.3.273>
- Ekowati, Y., Yulianto, B., & Yuwono, U. (2024). Implementation of STAD-PjBL model using diorama on astronomy materials to improve students' learning outcomes and collaboration skills. *Jurnal Pendidikan IPA Indonesia*, 13(1), 1–10. <https://doi.org/10.15294/jpii.v13i1.76123>
- Farikhatin, U., Subekti, A., & Hanum, F. (2024). Development of diorama media using the ADDIE model to support project-based learning. *Jurnal Pendidikan Dan Teknologi Pembelajaran*, 5(1), 14–26. <https://doi.org/10.32696/jptp.v5i1.1324>

- Harris, C. (2017). Augmented reality and virtual reality in education. *Journal of Educational Multimedia and Hypermedia*, 26(2), 137–146.
- Harris, J. (2017). Dioramas and immersion: Integrating art and augmented reality into language learning. *International Journal of Educational Technology*, 4(2), 56–65. <https://doi.org/10.1080/1475939X.2017.1379489>
- Hutterer, R., & Kamcke, C. (2015). History of dioramas. In S. Tunnicliffe & A. Scheersoi (Eds.), *Natural history dioramas* (pp. 7–20). Springer. [https://doi.org/10.1007/978-94-017-9496-1\\_2](https://doi.org/10.1007/978-94-017-9496-1_2)
- Ibanez, A. (2023). Art education through the sustainable design of learning spaces. *International Journal of Education Through Art*. <https://api.semanticscholar.org/CorpusID:257263971>
- Jewitt, C. (2008). Multimodality and literacy in school classrooms. *Review of Research in Education*, 32(1), 241–267. <https://doi.org/10.3102/0091732X07310586>
- Kaniaazahrira Nurkahfi, F. R., Adri, H. T., & Ichsan, M. (2024). Pengaruh penggunaan media diorama terhadap hasil belajar siswa kelas V pada pelajaran IPA. *Al-Kaff: Jurnal Sosial Humaniora*, 2(2), 131–137. <https://doi.org/10.30997/alkaff.v2i2.12863>
- Khaeroni, H., & Julia, J. (2024). Penggunaan media diorama dalam meningkatkan pemahaman konsep IPA. *Jurnal Inovasi Pendidikan IPA*, 10(1), 40–51. <https://doi.org/10.21831/jipi.v10i1.60123>
- Kolb, D. A. (1984). *Experiential Learning: Experience as the Source of Learning and Development*. Prentice Hall.
- Kustiawan, U. (2017). Peningkatan kemampuan berbahasa anak melalui media diorama tema transportasi. *Jurnal Pendidikan Anak Usia Dini*, 11(1), 24–34. <https://doi.org/10.21009/JPUD.111.03>
- Mayer, R. E. (2014). *The Cambridge handbook of multimedia learning* (2nd ed.). Cambridge University Press.
- Nasution, F., & Anas, M. (2024). Pengembangan media Diorama Siklus Air (Diosir) berbasis model ADDIE untuk meningkatkan keterampilan berpikir kritis siswa. *Jurnal Pendidikan IPA*, 10(1), 12–24.
- Nasution, I., & Anas, A. (2024). The development of “Diosir” as a project-based learning media to enhance critical thinking skills. *International Journal of Educational Research Review*, 9(1), 30–42. <https://doi.org/10.24331/ijere.1463582>
- Patton, M. Q. (2015). *Qualitative Research & Evaluation Methods* (4th ed.). Sage Publications.
- Qadri, A., Yoenanto, H., & N, I. (2024). Pengembangan media diorama berbasis pendekatan saintifik untuk siswa sekolah dasar. *Jurnal Ilmiah Pendidikan Dasar*, 11(2), 80–91. <https://doi.org/10.23969/jipd.v11i2.8235>
- Rusdi, A., Fitriani, A., Hamzah, A., Handayani, T., & Bujuri, D. A. (2022). Development of

diorama media on cultural diversity materials in My Country Islamic Elementary School. *Al-Mudarris: Journal of Education*, 5(2), 157–172. <https://doi.org/10.32478/al-mudarris.v5i2.601>

Swain, M. (2000). The output hypothesis and beyond: Mediating acquisition through collaborative dialogue. In J. P. Lantolf (Ed.), *Sociocultural theory and second language learning* (pp. 97–114). Oxford University Press.

Tunnicliffe, S. D., & Scheersoi, A. (2015). *Natural History Dioramas : History, Construction and Educational Role*. <https://api.semanticscholar.org/CorpusID:129991296>

Ulusoy, M., & Rihter, J. (2018). Visual literacy through diorama creation: Expanding students' multimodal expressions. *International Journal of Education & the Arts*, 19(7), 1–19.

Widiastuty, H., Hapsari, M. S., Kharimah, I., Rawenda, M., Ziya, K., & Maisarah, U. (2024). Inovasi pembelajaran bahasa Inggris di Madrasah Ibtidaiyah: Pemanfaatan diorama sebagai media interaktif. *LANDMARK: Jurnal Pengabdian Kepada Masyarakat*, 2(1), 84–92. <https://doi.org/10.37253/landmark.v2i1.9302>

Wijaya, D. C., & Mustika, D. (2022). Pengembangan media diorama tema ekosistem untuk kelas V sekolah dasar. *IJOIS: Indonesian Journal of Islamic Studies*, 3(2), 125–147.