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Soundscape exploration in art learning: Cultivating auditory sensitivity in the learning process

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Abstract

This study aims to explore the use of soundscape as a medium for art education to foster students' auditory sensitivity. A qualitative exploratory approach was employed using participatory observation, in-depth interviews, and documentation of audio artifacts. The research subjects were students from the Early Childhood Islamic Education Study Program at IAIN Manado, enrolled in the "Introduction to Sound Art" course. The findings indicate that integrating soundscape into art learning enhances students' awareness of sound elements, strengthens their connection with the surrounding environment, and encourages more contextual artistic expression. Students showed improved active listening skills, a deeper understanding of the cultural meanings of sounds, and the ability to create artworks based on their auditory experiences. These findings highlight that soundscape is not merely a background element but an effective learning medium for immersive, reflective, and locally relevant art education. The study recommends the development of a more multisensory and environmentally grounded art curriculum to support 21st-century education goals.

Keywords: Soundscape; Art education; Auditory sensitivity; Acoustic ecology; Contextual learning

1. Introduction

In the world of art education, learning is not only visual and motion-oriented, but also auditory aspects that play an important role in shaping learners' aesthetic sensitivity. One approach that is starting to be looked at in experiential learning is the use of soundscape, which is the soundscape of the environment that can shape perception, emotion and meaning. The concept of soundscape was first introduced by R. Murray Schafer, a Canadian composer and educator, who emphasized the importance of awareness of the sound environment as part of acoustic ecology education (Schafer, 1994).

In this digital, visual age, the auditory aspect is often overlooked. In fact, the ability to listen, identify, and interpret sound-or what is referred to as auditory sensitivity-plays an important role in the learning process, especially in the context of art. Soundscape-based art learning opens up space for learners to explore the world of sound as a source of creative inspiration, while training concentration, imagination and empathy.

According to the Multisensory Learning theory by Shams and Seitz (2008), learning processes that involve more than one sense are proven to be more effective in forming long-term memories and deep understanding. In this case, the soundscape becomes a multisensory medium that bridges the learning experience between the real world and the artistic world. Research also shows that exposure to a variety of environmental sounds can improve students' ability to reflect, focus, and emotional sensitivity to social and cultural contexts (Blesser & Salter, 2007).

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Unfortunately, the approach to art learning in many educational institutions is still conventional and does not fully utilize the potential of the auditory environment. Therefore, it is important to explore soundscape integration in art learning as an innovative strategy that not only enriches the learning experience, but also fosters auditory sensitivity as part of a complete aesthetic competence.

The idea of exploring soundscapes in art learning was not born out of thin air. It grew out of concerns about the dominance of the visual approach in the education system, especially in art learning in the classroom. Observation of the learning process that tends to rely solely on images, colors and visual forms raises a reflective question: what about the potential of sound as a learning medium that is also rich in meaning and experience?

The author's interest in the concept of acoustic ecology and experiential education is the main trigger in generating this idea. Especially when studying the works of R. Murray Schafer, especially his ideas about the World Soundscape Project, the author began to understand that the sound environment can shape a person's spatial, historical, and even emotional awareness. In the world of education, this opens up a great opportunity to make sound-which is often considered background or distraction-as the center of attention and a learning tool.

Another influence comes from reflective practice during teaching and classroom observation. Many students or learners have difficulty in expressing ideas creatively, even though they have strong emotional responses and personal experiences to the sounds around them, such as the sound of rain, markets, the sea, or the call to prayer. From there came the thought that sound is not just a passive object, but can be an active stimulus for artistic expression and cultural understanding.

Supported by the development of digital audio technology that is increasingly accessible, learning through soundscapes is now more possible at various levels of education. This combination of technology, environmental awareness and artistic approach is a strong basis for the idea of making soundscape a contextual and transformative art learning medium.

Thus, the exploration of soundscape in art learning is not just about adding sound elements, but an effort to build a new awareness that listening is part of understanding the world and the world itself can be a living source of learning.

The urgency of this research lies in the need for art learning innovations that are more contextual and multisensory, especially in response to the tendency of the education system to focus on visual aspects and text. Along with the development of the 21st century learning paradigm, art education is required to be better able to hone students' critical thinking skills, creativity, and aesthetic sensitivity as a whole. One aspect that has not been explored much in art learning is the potential of sound media-especially soundscape-as a means to foster auditory sensitivity and environmental awareness.

According to Schafer (1994), soundscapes are the soundscapes we hear everyday, and understanding them is an important part of acoustic ecology education. He emphasizes that listening is an active act that involves attention, interpretation, and emotional response. In the context of art education, listening is not only a receptive activity, but also a creative one - where learners are invited to create connections between sound, meaning and artistic expression (Schafer, 1994; Truax, 2001).

Shams and Seitz's (2008) multisensory learning theory also reinforces that learning is more effective when it involves more than one sense. They state that simultaneous auditory and visual learning can improve information retention and deeper understanding. In this case, the soundscape opens up space for students to not only "hear", but also "feel" and "experience" sound actively-an approach that is in line with Kolb's (1984) concept of experiential learning.

Research from Blesser & Salter (2007) also shows that the sound environment affects one's perception of space, mood and cultural understanding. Integrating soundscape into art learning, then, can enrich students' understanding of the social and cultural context around them, especially if it is linked to local or traditional elements. This is particularly relevant in the Indonesian educational context, which is rich with a diversity of traditional sounds and distinctive soundscapes.

Unfortunately, in the local context, this approach is still minimally applied systematically in the classroom. Art teachers or lecturers tend to be more familiar with visual media than sound media as a creative stimulus. Therefore, this research becomes urgent to do in order to be able to:

Offering a new approach to art learning based on auditory experience, providing an alternative learning model or strategy that is more inclusive and contextual, encouraging learners to be more sensitive to the environment, local culture, and aesthetic values through sound media. With a strong theoretical foundation and current educational needs that demand a holistic approach, this research contributes directly to the development of art education that is adaptive, creative, and relevant to the times.

Considering the potential of soundscape as a learning medium capable of fostering auditory sensitivity and enriching learners' aesthetic experience, this research is important to conduct. The integration of soundscape in art learning not only offers an innovative approach that is in line with the demands of 21st century education, but also contributes to developing environmental and cultural awareness through deep listening experiences. Through this research, it is hoped that a more holistic art learning strategy can be formulated, which combines visual and auditory aspects in a balanced manner, and encourages learners to be more sensitive to their surrounding environment. Thus, the exploration of soundscape in art learning is not only pedagogically relevant, but also essential in shaping a generation that is more aware of the importance of sound in life and culture.

The following is an example of **Research Methodology sub-chapter** for a scientific paper entitled *"Soundscape Exploration in Art Learning: Cultivating Auditory Sensitivity in the Learning Process "*. This explanation is designed for qualitative research with an explorative and contextual approach.

2. Research Methodology

2.1. Research Approach and Type

This research uses a qualitative approach with a descriptive exploratory research type. This approach was chosen because it is in accordance with the aim to explore in depth the process and experience of soundscape-based art learning in an educational context. This research does not aim to quantitatively measure effects, but to understand the meaning, perceptions and experiences of participants in exploring soundscape as a learning medium.

According to Moleong (2017), the qualitative approach aims to understand phenomena holistically and deeply through direct interaction between the researcher and the research subject. Thus, this approach allows researchers to explore how soundscapes shape auditory sensitivity in the art learning process.

2.2. Location and Time of Research

This research was conducted at the Early Childhood Islamic Education Study Program at IAIN Manado. This location was chosen because it has art courses that allow the implementation of soundscape-based learning. The research was conducted from December 2024 to March 2025.

2.3. Research Subject

The subjects in this study were students and lecturers/teachers of art courses involved in the learning process that integrates soundscape media. The subject selection technique used purposive sampling, which is a deliberate selection based on criteria.

2.4. Data Collection

Data was collected through the following techniques:

2.4.1. Participatory Observation

The researcher directly observed the learning process involving the soundscape, noting the interaction, response and engagement of the learners.

2.4.2. In-depth Interview

Lecturers and students were interviewed to explore their perceptions, experiences and understanding of the use of soundscape in learning.

2.4.3. Documentation and Audio Artifacts Study

Including lecture notes, student assignment results, and sound documentation or soundscape compositions made during the learning process.

2.4.4. Data Analysis Technique

The data obtained were analyzed using thematic analysis (Braun & Clarke, 2006), which is the process of identifying, grouping, and interpreting key themes that emerge from qualitative data. The stages of analysis included:

- Transcription of data from interviews and observation notes.
- Data codification to categorize the main ideas.
- Discovery of recurring patterns and themes.
- Interpret the meaning of these themes in the context of art learning.

2.5. Data Validity

To maintain data validity and credibility, source and method triangulation techniques were used. That is, data was confirmed through various sources (students, lecturers, and observations) and methods (interviews, observations, documentation). In addition, member checking was carried out by confirming interim findings with respondents to ensure that the researcher's interpretation was in accordance with field reality.

2.6. Research Ethics

This study upholds ethical principles by ensuring participants have given informed consent, maintaining confidentiality, and ensuring that their involvement is voluntary and does not harm any party.

3. Research Results

This research was conducted at IAIN Manado's Early Childhood Islamic Education Study Program. Specifically in the course "Introduction to Sound Art" which was conducted for one semester. The research subjects consisted of one lecturer and 25 fourth-semester students who were actively involved in soundscape exploration activities as learning media.

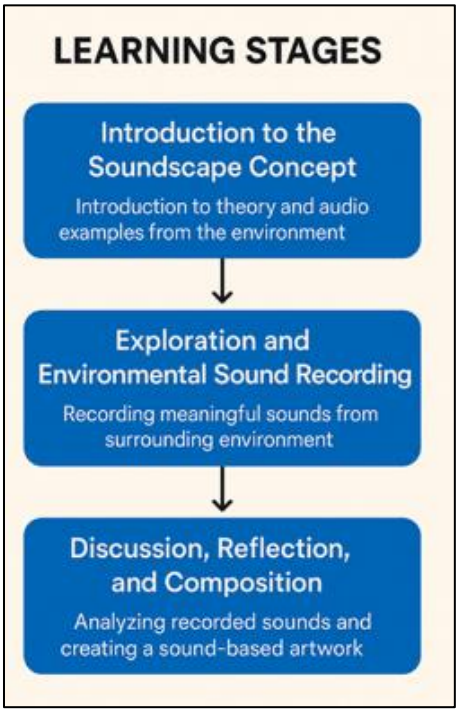

Figure 1 Learning Stages

Students come from diverse cultural backgrounds, so they have different environmental sound references, ranging from the natural sounds of mountains, traditional markets, to religious sounds such as azan and prayer. This gives its own color to the learning process which is based on personal experience and interpretation of sound.

Learning takes place in three main stages, namely first, including the introduction of the Soundscape Concept where the lecturer introduces soundscape theory based on the thoughts of R. Murray Schafer as well as audio examples from the surrounding environment and the work of sound artists. The second is the exploration and recording of environmental sounds where students are assigned to record sounds from the environment that have personal or cultural meaning, such as markets, beaches, places of worship, or their own homes and the last or third is discussion, reflection, and composition where the recording results are then analyzed together in class. students create sound collages or simple audio installations, then reflect on their listening experiences.

As a result, from the perspective of students, most students showed great enthusiasm for this approach. They felt that this method provided space for self-expression and connection with the environment, as well as opening up new ways of understanding art more imaginatively. The students felt it could foster a sense of caring for voices that are often ignored. One of the students quoted from the interview said, "I just realized that small sounds like footsteps in the hallway of the pesantren can also be art material. This makes me more sensitive." (Interview with one of the students).

The results of changes in student auditory sensitivity based on student observation and reflection, there is an increase in auditory sensitivity, which is shown through the ability to distinguish sound elements (rhythm, texture, timbre). In addition, there is also awareness of the meaning of sound in a socio-cultural context. Another impact is the tendency to appreciate silence, natural sound, and sound structure in daily life. Some students also began to apply this principle in their artistic practices, such as creating sound poetry, theater works, and sound-based children's learning media.

Some important findings from this research include:

- Soundscapes are effective in stimulating non-visual sensibilities and artistic expression.
- Learning becomes more participatory and reflective, as each student brings his or her own sound experience.
- Students experience a paradigm shift from "learning about art" to "experiencing art".
- The involvement of local culture strengthens identity and understanding of the social context of learning.

4. Discussion of Research Results

The results show that the integration of soundscape in the art learning process brings a new dimension to students' learning experience. Not only does it enrich the understanding of sound art elements, this approach also provides space for students to develop active listening skills and appreciation of the context of the surrounding acoustic environment.

According to Schafer (1994), a soundscape is a soundscape that reflects culture, space and time, and can be used as a reflective tool in understanding the relationship between humans and their environment. In this context, students learn not only to recognize sound as an aesthetic object, but also as a meaningful sensory and social experience. This is in line with the constructivistic approach in art education, where knowledge is built through experience and direct interaction with the learning environment (Hein, 1991).

Improved auditory sensitivity was one of the key findings in this study. Students showed progress in the following areas:

- Ability to distinguish and understand sound characteristics.
- Awareness of the cultural and emotional values of sound.
- The ability to reflect the listening experience in artistic form.

This phenomenon is in line with Barrett's (2006) notion of the important role of perception-based learning in art education, which emphasizes how sensory perception, including auditory, forms the basis for the creation and meaning of art. As such, soundscapes are an effective medium to encourage learners' emotional, cognitive and aesthetic engagement.

The use of soundscape also allows students to convey their cultural experiences and identities through sound. In the field exploration assignment, students tended to choose sounds that were familiar and personally or collectively meaningful, such as the sound of a traditional market, the call to prayer, the crashing of waves, or the chanting of prayers. This shows that soundscape can be an inclusive and contextually relevant medium of self-expression.

This reinforces Feld's (1996) notion of "acoustemology", which is the understanding of the world through the way we hear and give meaning to sound. In art learning, this approach encourages the integration of local sensory experiences in pedagogical practice, while responding to the need to make art education more contextualized and rooted in learners' cultural environment.

The findings of this study demonstrate the importance of incorporating soundscape-based approaches in art learning curricula, particularly in the realm of higher education. By making sound the main medium, educators can encourage more immersive student engagement and participation, develop appreciative, interpretative and reflective skills, and link art learning with environmental, cultural and self-awareness issues.

This strategy is also in line with the STEAM (Science, Technology, Engineering, Arts, and Mathematics) approach that emphasizes cross-disciplinary integration through exploratory and experiential methods.

5. Conclusion

Based on the results and discussion of the research, it can be concluded that the use of soundscape media in art learning makes a significant contribution to the development of students' auditory sensitivity. Through the stages of exploration, recording, reflection, and composition, students are not only able to distinguish sound characteristics, but also appreciate cultural values and express their auditory experiences in the form of artworks.

The application of this approach creates an immersive and contextualized learning experience, where students are actively involved in observing, listening, and reflecting on sounds from the surrounding environment. Such engagement has enhanced critical thinking skills, cultural empathy and aesthetic appreciation of sound, which are essential competencies in contemporary art education.

In addition, the soundscape approach is proven to be able to connect art learning with local contexts and students' real lives, making learning more relevant and meaningful. It also opens up space for the development of interdisciplinary learning methods that place sound as the main medium in shaping a holistic learning experience.

Thus, soundscape can be recommended as an alternative art learning strategy in higher education, especially in order to foster auditory sensitivity, environmental awareness, and creative expression of students as a whole.

Recommendation

Based on the findings and conclusions in this study, it is recommended that the soundscape approach be made an integral part of art learning strategies, especially in courses related to sound art, creativity, and sound appreciation. Art educators are expected to utilize environmental sound media as an effective tool to foster auditory sensitivity and emotional involvement of students in the learning process. This approach is proven to bridge cognitive learning with reflective and immersive sensory experiences.

Higher education institutions are also expected to support this initiative by providing supporting facilities and infrastructure, such as sound recording devices, listening rooms, or audio-based art laboratories. The availability of these facilities will enrich students' learning experience and enable a wider exploration of the potential of sound as a medium of expression and learning.

For students, the soundscape approach provides an opportunity to make sound a material for artistic exploration that is not only aesthetic but also full of social and cultural meaning. Through the process of active and reflective listening, students can build self-awareness, hone environmental sensitivity, and broaden their horizons about art as a medium of holistic experience.

As for future research, it is recommended to expand this study to more diverse levels of education, including basic education and non-formal arts communities. Research can also be developed with a quantitative approach to measure the impact of using soundscapes on certain aspects such as learning concentration, auditory empathy, or student creativity.

Finally, it is important to encourage the integration of soundscape approaches in cross-disciplinary learning, for example through collaborations between art, environmental science and digital technology to expand the potential for innovative, contextualized and transformative education in the 21st century learning era.

Compliance with ethical standards

Disclosure of conflict of interest

No conflict of interest to be disclosed.

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