

Sound media as steam-based sensoric and motor activities

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Abstract— Engaging children in activities involving sound media presents an intriguing approach to enhancing their motor and sensory development. As educational media continue to evolve, the integration of interactive elements is increasingly prevalent. This study delves into exploring the potential application of STEAM (Science, Technology, Engineering, Arts, and Mathematics) in children's learning. Through observations, the study scrutinizes the efficacy of utilizing electronic equipment, synthesizers, learning tools, and organic materials in fostering enjoyable educational experiences. The research reveals that an interactive audio-based learning model significantly appeals to children, rendering the learning process more enjoyable and comfortable. This is evidenced by prolonged engagement and increased interest in the subject matter. Consequently, the study suggests that sound-based mediums offer a unique avenue for cultivating distinct sensory and motor skills compared to traditional learning approaches.

STEAM is an evolving educational approach that emphasizes the integration of lessons across scientific, technological, engineering, artistic, and mathematical disciplines. This approach seeks to foster creativity, problem-solving, and innovative thinking through hands-on experiences and project-based learning. Within this framework, the utilization of sound media holds significant potential to create interactive and engaging learning experiences, actively involving students in sensory and motor activities (Papastergiou, 2009).

The unique attributes of sound media lies in its ability to combine sensory elements like hearing with motor components such as physical movement. In this discussion, we will explore how sound media can be harnessed in activities that incorporate both sensory and motor aspects. Our focus will be on how auditory stimuli can enhance sensory perception and stimulate motor activity, particularly examining how this approach can be applied within the context of STEAM education (Tanner, 2010).

This study will extensively delve into the concept of sound media within the context of STEAM education, investigating its varied applications and methods in activities involving sensory and motor functions. Additionally, it will address the associated challenges and opportunities linked with the use of sound media across different contexts, as well as its implications for education and human development (Hmelo-Silver, 2004).

EXPERIMENTAL RESULTS

The experiment, titled "Sound Media as STEAM-Based Sensory and Motor Activities," yielded several significant

results associated with the use of sound media in STEAM-based education and the sensory and motor development of children. The following outlines the results obtained from this experiment:

The experimental outcomes suggest that the use of sound media in STEAM-based education has the potential to enhance children's understanding of sensory and motor skills, promoting active engagement in the learning process and creating a positive learning experience for them. The integration of STEAM elements in educational activities provides a supportive framework for the holistic development of children. Overall, sound media emerges as an effective tool in enriching children's learning experiences concerning sensory and motor development.

CONCLUSION

Firstly, the utilization of sound media stimulates a noteworthy enhancement in children's sensory responsiveness. They acquire a better understanding of sounds and become adept at identifying and associating sounds with specific situations or objects. This underscores the significance of sound media as a tool to enrich children's sensory experiences.

Secondly, the experiment aids in the development of both fine and gross motor skills in children. They exhibit improvements in hand-eye coordination, the ability to manipulate writing tools, and their proficiency in following instructions. Their physical movements become more coordinated, and they display increased willingness to explore various physical movements.

Thirdly, sound media contributes to enhancing children's active involvement and creativity in educational activities. Engaging in artistic activities such as drawing and dancing allows children to explore voices and express themselves creatively. This reflects the potential of sound media in fostering creativity and expressive skills among children.

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