

The Role of the YouTube Application in Enhancing Motor Development in Early Childhood

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ABSTRACT

Objective: This study aims to examine the role of the YouTube application in enhancing motor development in early childhood. **Method:** The research employs a Systematic Literature Review (SLR) method, utilizing secondary data in the form of words, phrases, and clauses sourced from national books and journals. Data collection was performed through note-taking and observation techniques, while theory triangulation was used for validation. **Results:** The study identifies five key roles of YouTube in motor development: 1) Learning media for gross motor activities, 2) Enhancing fine motor skills through creative activities, 3) Teaching proper body posture, 4) Interactive motor games, and 5) Encouraging physical movement through animated videos. **Novelty:** The novelty of this research lies in the identification of YouTube as a dynamic platform that can facilitate various aspects of motor development in early childhood, offering an accessible and engaging tool for learning. The findings emphasize YouTube's potential as an educational tool for supporting motor skill development in young children.

INTRODUCTION

YouTube is a digital media accessed through the internet [1]. This platform allows users to watch, upload, and share videos for free [2]. Additionally, YouTube is a website that enables users to freely share visual recordings [3]. YouTube utilizes the internet to run its features, allowing users to stream animations or videos [4]. YouTube has now evolved into the most popular video distribution platform with billions of users worldwide [5]. Thus, YouTube is an online video service that allows users to watch, upload, and enjoy various videos online, used by billions of people around the world.

YouTube has the advantage of allowing users to upload various content with flexible durations for free [6]. Additionally, YouTube makes it easy for users to access videos offline, both through download features and playback without an internet connection [7]. YouTube excels in content presentation, as the videos uploaded are presented in an engaging manner and have characteristics that reflect the creator's identity [8]. Despite its many advantages, YouTube also has some drawbacks.

The drawbacks of YouTube include disruptions to video playback when there is an issue with the internet connection [9]. YouTube also has weaknesses in terms of video content that may not be suitable for public viewing, as well as many uncontrolled live chats [10]. Additionally, there are individuals who irresponsibly spread fake news and content that is not appropriate for children, including unverified adult videos that can be

accessed by anyone [11]. Despite its shortcomings, YouTube can provide positive benefits in supporting child development and learning.

YouTube is beneficial in supporting child development, particularly in enhancing social interaction [12]. It also provides educational content, such as children's songs [13]. Furthermore, interactive videos like puzzles and songs encourage active participation from children [14]. Tohari, in Julianingsih & Widayanti [15], states that YouTube is beneficial in supporting learning by presenting concepts visually and auditorily, making it easier for users to understand. In addition to providing interactive and educational content, YouTube helps children develop physical abilities, particularly in mastering various body movements. A child's ability to master body movements is part of motor development.

Motor development is the stage where a child begins to master the ability to control body movements [16]. Motor development must be monitored to support optimal growth [17]. Motor development is part of the process of skill development in children [18]. Therefore, motor development is a crucial process that must be monitored, as it plays a role in mastering movement abilities and supports a child's optimal growth and development.

Motor skills are divided into two categories: gross motor skills and fine motor skills. Gross motor skills involve large movements that use the whole body or parts of the body, while fine motor skills involve small movements of body parts that can be trained. Nofianti (2020) explains that gross motor skills involve large muscles, in line with a child's development, while fine motor skills control small muscles like fingers to perform tasks requiring precision [19]. Additionally, Baiti (2021) states that gross motor skills relate to a child's ability to perform movements like sitting and standing, while fine motor skills include coordination of small movements like grasping, pinching, and writing [20].

Motor development helps children adapt to school situations through activities such as drawing, painting, marching, and writing [21]. Furthermore, motor development supports cognitive, language, and social aspects, as these are interconnected [22]. Motor development also enhances a child's physical skills in performing movements that require body coordination [23]. Motor skills in children develop quickly and are easy to train, especially in early childhood.

Early childhood is defined as the period where children grow and develop rapidly, often referred to as the golden age [24]. Early childhood is a crucial period that significantly influences character formation [25]. It is an important stage in a person's life because, during this time, development occurs rapidly, and children have the opportunity to develop their potential [26]. Thus, early childhood can be considered as a critical stage in life where children experience rapid growth and begin to develop their character and potential.

Children in early childhood have unique characteristics, both psychologically, morally, and physically [27]. Early childhood children are egocentric, meaning they often judge things based on their own perspective and prioritize their own desires without

considering others [28]. Additionally, early childhood children have distinctive traits, with each child possessing unique qualities that set them apart from one another [29]. Due to these unique characteristics, their development requires special attention to ensure healthy growth.

The development of early childhood is a continuous process that depends on several factors, both individual and environmental. Rivanica and Oxyandi (2024) further added that development includes the improvement of body functions and structures, becoming more complex, covering large movements, fine motor skills, language abilities, speech, as well as socialization and independence skills [30]. Additionally, Sutinah (2021) stated that development involves qualitative changes, including psychological changes over time, influenced by interactions with the environment [31].

This article is important because it highlights how YouTube can help support motor development in early childhood through engaging educational videos. YouTube offers various educational content designed to stimulate children's movement and coordination. Therefore, YouTube can be effectively used as a tool to support children's growth and development.

RESEARCH METHOD

This research is a Systematic Literature Review (SLR). SLR is a technique used to investigate, examine, and interpret all research relevant to the selected topic and research question [32]. The data in this study is secondary data. According to Umaroh and Hasanudin (2024), secondary data can take the form of national scientific publications, written works such as theses, books, and other journals related to the research being conducted [33]. The secondary data applied in this study includes words, phrases, clauses, and sentences taken from national journals and Google Books published at the national level. Data collection techniques used the observation and note-taking method.

The observation and note-taking method is a data collection strategy that begins with observing the use of language, both in written and oral forms, followed by the researcher documenting the information found during the observation process to obtain more detailed and relevant data. In this research, the observation method involved searching for sources from scientific articles and books, then analyzing them thoroughly to ensure the information found aligns with the keywords in the title, ensuring the data obtained is relevant. The note-taking method involved recording information based on the identified keywords, discarding irrelevant data, and noting items that matched the main topic.

Data validation techniques used triangulation. According to Puspita and Hasanudin (2024), triangulation is a strategy used to enhance credibility and quality, and to ensure accuracy by integrating information obtained from different sources. In this study, theory triangulation was used, where theories from research results or expert concepts were used to validate the statements or concepts being presented [34].

RESULTS AND DISCUSSION

Results

The following image presents an illustration of early childhood activities aimed at developing gross motor and fine motor skills.



Figure 1. A child imitates movements in a youtube video.



Figure 2. A snapshot from a youtube video.



Figure 3. A child imitates an image from a youtube video.



Figure 4. A child practices fine motor skills.



Figure 5. A child imitates animal movements.



Figure 6. An example of a video clip.



Figure 7. A child follows exercise movements.



Figure 8. A child practices body posture.

YouTube plays a significant role in supporting motor development in early childhood. The platform offers various interactive videos that help children develop gross motor skills, such as running, jumping, and dancing, which improve their

coordination and balance. Additionally, YouTube provides creative videos involving activities like drawing, origami, and crafts that enhance children's fine motor skills, particularly in moving their hands and fingers with precision. These videos also teach proper posture, such as standing tall and sitting with correct body alignment, which helps support healthy physical growth and prevents injuries. Moreover, interactive motor games on YouTube encourage children to move actively and think creatively, simultaneously training their gross motor skills and cognitive abilities. Through engaging animation videos, children are motivated to follow the movements to the rhythm of the music, which not only enhances their motor skills but also keeps the learning experience fun and engaging. Thus, YouTube is not only a source of entertainment but also an effective tool for promoting physical and motor development in young children.

Another important aspect is that YouTube videos foster independent learning in children. As they follow along with the activities, children are encouraged to engage in self-directed exploration and practice, which enhances their learning autonomy. The availability of a wide range of videos allows children to revisit content multiple times, which reinforces the skills they are learning and provides an opportunity for them to master movements at their own pace. This encourages perseverance and builds confidence in their physical abilities. Furthermore, children can explore different activities beyond the traditional classroom setting, which supports diverse learning styles and individual preferences.

Additionally, YouTube's ability to provide educational content in an entertaining format makes it highly effective in holding children's attention. The combination of bright colors, music, and engaging visuals captures the child's interest, making learning feel like a fun activity rather than a chore. This is especially crucial in early childhood development, where engaging content can significantly improve retention and the application of learned skills. Children are more likely to imitate the movements they see in the videos, which not only improves their motor skills but also helps in building social and emotional skills through interaction with peers and caregivers. Overall, YouTube serves as a dynamic platform that promotes both physical and cognitive development in young learners.

Moreover, YouTube's interactive and customizable features provide a flexible learning environment that can cater to the varying developmental stages of children. For example, videos designed for younger children may focus on simpler, repetitive movements, while videos for older children may present more complex physical activities that involve coordination and balance. This adaptability allows parents and educators to select content that is appropriate for the child's age and skill level, ensuring that the learning experience is neither too challenging nor too easy. This customization makes YouTube an accessible and versatile tool for early childhood motor development.

Another benefit of YouTube is the accessibility and convenience it offers. Children can access a wide variety of educational videos anytime, anywhere, making it easier to integrate learning into daily routines. Whether at home, in the car, or during travel,

YouTube can become a tool to keep children engaged while simultaneously supporting their motor skill development. This ease of access is particularly useful for parents and educators who are seeking to enrich a child's learning experience outside of formal educational settings. With a few taps or clicks, children can dive into a world of educational content that fosters both enjoyment and skill-building.

Finally, while YouTube has many advantages, it is essential for parents and educators to monitor the content that children access. Although the platform provides a vast array of educational materials, there are also risks associated with unsupervised content, such as inappropriate videos or excessive screen time. It is crucial to curate the content carefully and set boundaries around screen usage to ensure that children engage with YouTube in a healthy and productive way. When used responsibly, YouTube can be a valuable tool for promoting motor development and other essential skills in early childhood, making it an integral part of a well-rounded learning experience.

Discussion

The YouTube application plays an important role in supporting motor development in early childhood through interactive and engaging educational videos. The roles of YouTube in improving motor skills in young children are as follows:

1. Media for gross motor activity learning

Gross motor skills are vital in early childhood development as they involve large muscle movements such as running, walking, and jumping. Azizah et al. (2023) state that gross motor skills play a crucial role in brain function, affecting growth and development [35]. This development occurs with age and is influenced by genetics, nutrition, environment, and physical activity [36]. YouTube provides interactive visual videos designed for children featuring movements like dancing, jumping, and running, which help improve coordination and balance. These videos are accompanied by visual instructions, animations, and cheerful music, encouraging children to follow movements in a fun way. Nugroho et al. (2021) emphasize that gross motor exercises are essential for helping children control and synchronize their body movements during growth [37].

2. Training fine motor skills through creative activities

Fine motor skills are crucial for children as they enable them to perform tasks in later developmental stages [38]. YouTube offers a variety of videos with activities like drawing, origami, and crafts that help children develop fine motor skills. Lestari et al. (2024) state that activities like folding paper train fine motor skills and stimulate children's thinking. Watching these videos, children learn to move their hands and fingers carefully and precisely [39]. YouTube also teaches children how to hold pencils or crayons properly while drawing and how to fold paper neatly while making origami. These activities, which require hand and finger coordination, help strengthen small muscles in the hands and fingers while fostering creativity [40].

3. Teaching proper posture

Teaching children the proper posture can be done early through YouTube's exercise videos. Exercise improves physical condition, strength, flexibility, and balance [41]. YouTube provides clear steps on how to stand and move with proper body

alignment. Children learn to maintain a balanced posture to avoid strain on parts of the body such as the back and neck during movements. They also learn to stand upright, relax their shoulders, and sit in a way that supports spine alignment. Proper posture is important as it supports healthy bone and muscle growth and prevents pain or injury during movement or play. Rapisa (2019) states that posture exercises help improve joint flexibility and stimulate gross motor skills [42].

4. **Interactive motor games media**

Interactive motor games on YouTube encourage children to be active and think creatively. Educational and interactive games serve as a tool to support children's development by helping them grow in various aspects [43]. Children can learn from videos that encourage activities such as jumping, running, and mimicking animal movements. Technology-assisted learning provides visual and interactive stimulation, allowing children to enhance creativity [44]. YouTube videos combine physical exercises with thinking challenges, allowing children to develop both gross motor skills and cognitive abilities simultaneously. These engaging videos, presented in colorful ways, motivate children to follow along.

5. **Encouraging movement through animated videos**

YouTube offers animated videos featuring engaging visuals and movements that children can easily follow. Kotimah (2024) states that audiovisual media plays an essential role as an alternative learning tool in technology-based education [45]. The animations show hand, foot, and body movements that encourage children to move along with the rhythm of the music. These repetitive movements help improve coordination between the eyes, hands, and feet. The cheerful music paired with vibrant visuals creates a fun learning environment and prevents children from becoming bored during physical activities. Fauziyah et al. (2024) highlight that cheerful music increases children's interest, leading to more effective learning experiences [46]. Animated videos also present various physical activities specifically designed to stimulate children to try and follow the movements [47].

CONCLUSION

Fundamental Finding : This study identifies five key roles of the YouTube application in enhancing motor development in early childhood: 1) media for gross motor activity learning, 2) training fine motor skills through creative activities, 3) teaching proper posture, 4) interactive motor games media, and 5) encouraging movement through animated videos. **Implication** : The findings highlight the potential of YouTube as an effective tool to support motor skill development in young children, providing accessible and engaging content that promotes both gross and fine motor activities. **Limitation** : However, this study relies on secondary data and the content available on YouTube may vary in quality and appropriateness, potentially limiting its effectiveness in certain contexts. **Future Research** : Future studies should explore the long-term impact of YouTube-based motor skill development programs on children's

physical and cognitive growth and evaluate the effectiveness of specific types of content across diverse educational settings.

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