Using Video Modeling in Enhance Social Skills to Children With Autism:
A Literature Review

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The objective of this research paper is to explore the advantages, limitations, and empirical evidence for the effectiveness of video modeling as an instructional approach for children with autism. Video modeling, which falls under assistive technology in therapeutic intervention strategies, utilizes videos to exhibit desired behaviors and competencies. A total of 28 research articles, carefully selected from 3 reputable publication resources (APA PsycNet, Springer, and Eric), were analyzed through content analysis. These articles were published in online databases between 2000 and 2024. The following sections of the paper delve into the benefits of video modeling, including improved learning opportunities, increased engagement, and transferable skills. Furthermore, the paper presents empirical research findings that support the positive impact of video modeling on enhancing social skills in children with autism.

Keywords: Video modeling, Autism, Social skills

Rama Med J: doi:10.33165/rmj.2024.47.2.266424
Received: November 21, 2023 Revised: March 7, 2024 Accepted: April 3, 2024
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Introduction

The integration of scientific and technological advancements has led to a profound transformation of the educational landscape, with technology swiftly becoming an intrinsic component of the system. Utilizing tools like televisions, computers, and handheld devices like iPads have facilitated the interactive presentation of skills and behaviors to younger children. Previous research underscores that individuals with behavioral difficulties can greatly benefit from the strategic implementation of technology. To comprehensively gauge the efficacy of technology and video modeling in enhancing social skills outcomes analysis could be undertaken.

Autism spectrum disorder (ASD) stands as a neurodevelopmental condition recognized by challenges in social communication and interaction. Educators and therapists have long grappled with the intricate task of imparting social skills to children affected by autism. These youngsters often encounter hurdles in communication, social engagement, and behavior control, which hinder their adept navigation of social scenarios. Nevertheless, the recent surge in technological advancements has ushered in fresh avenues for instilling social skills in children with autism. Among these approaches, video modeling has emerged prominently within the realm of autism intervention.

Methodology

The results of the study were demonstrated using APA PsycNet, Springer, and Eric databases. First, a total of 16 articles were analyzed in the generation of this review, which included literature reviews, experimental studies, and pilot studies. They range in evidence level from Level I (systematic reviews) to Level III (nonrandomized controlled cohort/follow-up studies). The publication dates span from 2000 to 2020.

Then, a total of 12 articles were analyzed in the generation of this review, of which all were considered relevant to a randomized controlled trial, meta-analyses, literature reviews, and single-subject design studies. Their evidence levels range from Level I (eg, randomized controlled trials) to Level III (eg, nonrandomized studies). These publications span from 2003 to 2013.

What is Video Modeling?

Video modeling is a therapeutic intervention strategy that utilizes videos to demonstrate specific behaviors and skills. Video modeling constitutes a method involving the utilization of videos to exemplify desired social behaviors, competencies, or activities. Typically, these videos showcase diverse individuals, encompassing both children and adults, participating in fitting social interactions or displaying specific proficiencies. Basic video modeling involves capturing someone demonstrating the desired behavior, which is then observed by individuals with behavior difficulties. Video prompting breaks down the behavior into steps, with pauses allowing individuals to attempt each step before proceeding.

Exploring the instructional technique of video modeling, this approach entails the exhibition of videos showcasing suitable social behaviors and competencies. As the main characteristic of video modeling is generally adjusting and regaining appropriate behaviors, various forms of video modeling exist within the applied behavior analysis (ABA) perspective. Lately, video modeling has garnered attention as a promising intervention for enhancing skills in individuals with autism since these children will benefit from the ABA approach. It involves the presentation of videos that depict individuals engaging in targeted behaviors or skills, which are then imitated by the learner. The videos can be created using various techniques, such as live modeling, peer modeling, or self-modeling, depending on the specific needs of the child.
Autism Spectrum Disorder and Video Modeling

ASD, a neurodevelopmental condition, has garnered substantial scholarly attention over the past few decades. With varying degrees of severity and a diverse combination of symptoms affecting communication, social interaction, behavior, and sensory functioning, ASD’s impact varies from person to person. Individuals with ASD commonly struggle with social interactions, complex play skills, and exhibit resistance to change, leading to difficulties in predicting future events or adapting to daily life alterations. It is essential to highlight that an extensive body of research showcases the efficacy of diverse interventions in enhancing functional and social skills among children with autism through video technology. This consensus is supported by numerous studies, ranging from 10 to 13. A prevailing approach within this research domain is video modeling. Video modeling, a therapeutic pedagogical strategy, employs video recordings to provide visual models of desired behaviors or skills. Notably, video modeling strategies efficiently drive therapeutic changes across a broad spectrum of behaviors in cost-effective and time-efficient manners.

Moreover, video modeling practices have proven successful across various age groups, as evidenced by studies ranging from 15 to 18. The National Professional Development Center on Autism Spectrum Disorders underscores the growing body of research on video modeling’s efficacy, particularly for individuals with ASD. Video modeling has been harnessed to foster daily living skills and enhance functional capabilities, perspective-taking, and social-communicative behaviors. In light of the evolving technological landscape, Nikopoulos et al. highlighted that technology’s continuous advancement can enhance the efficiency and effectiveness of video modeling applications, addressing the diverse learning needs of students. Darden-Brunson et al. propose 4 pivotal factors influencing an individual with ASD’s learning through video modeling: capturing attention, gauging motivation, employing effective reinforcements for retention, and encouraging active production.

Research affirms that video modeling effectively promotes skill acquisition in individuals with autism. This strategy offers practical advantages, including the presentation of diverse examples, precise control over modeling, exact replication and reuse of video content, and the efficiency of cost and time during implementation. To sum up, video modeling emerges as a robust intervention for enhancing functional and social skills among individuals with ASD. Video modeling’s concealed implementation process and its adaptability to various strategies contribute to its effectiveness.
Evolving technology and understanding key learning factors further amplify video modeling’s potential in catering to the needs of individuals with ASD. As research continues to underscore its benefits, video modeling’s capacity to promote skill acquisition remains a valuable tool for supporting individuals with ASD. An ever-expanding body of research consistently underscores its potential across diverse aspects of ASD, making video modeling a promising avenue for intervention and skill enhancement.

Use of Video Modeling in Teaching Social Skills

Definition of video modeling is a teaching technique that involves presenting video recordings of individuals engaging in specific behaviors or social interactions. These videos serve as visual demonstrations, allowing individuals with behavioral difficulties to observe and imitate the desired behaviors. Video modeling can be used to teach a wide range of skills, including social skills, communication skills, and daily living skills.

Nikopoulos et al. conducted a seminal study that demonstrated video modeling’s potential to boost social and play skills among children with behavioral difficulties. Similarly, Wynkoop et al. explored video modeling interventions and highlighted their dual impact—facilitating skill acquisition while curbing inappropriate behaviors. Wang et al. emphasized the prevalence of peer-mediated and video modeling approaches in social skills training for students with autism. Cihak et al. noted video modeling’s role in enhancing communication by increasing independent communicative initiations in children with autism and developmental delays. For example, the individual with autism engages in repetitive viewing of these videos, thereby absorbing and replicating the depicted behaviors. Also, video self-modeling (VSM) enables individuals with autism to view their successful performance of the target behavior; on the other hand, Point-of-view video modeling (POVM) offers a first-person perspective of the behavior, enabling individuals with ASD to see the behavior from their viewpoint.

Moreover, combining video modeling with peer mentoring, as shown by Ogilvie, can effectively enhance social skills learning. Research also indicates that video modeling interventions extend to improving independent living skills and community access for individuals with autism and intellectual disabilities. The study of Hong et al. underscores video modeling’s positive effects on teaching functional living skills and enhancing community access.

In conclusion, the symbiotic relationship between technological progress and social skills enhancement is evident. The potential of technology, especially video modeling, to bolster social skill experiences for individuals with disabilities, particularly those on the autism spectrum, is substantial (Figure 1 and Table 1).

Figure 1. Children With Autism Will Spend 3 Sessions Watching Video Modeling About Appropriate Social Skills

Example 01

Example 02

Picture credit: Resource classroom, Taichung Municipal Han-Kou Junior High School, Taiwan
# Table 1. Similar Findings From the Analyzed Articles

<table>
<thead>
<tr>
<th>Similar Findings</th>
<th>Summaries</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Video modeling efficacy for children with ASD</td>
<td>Results show improvements in language, play, and social behaviors.</td>
<td>Bugged(^1), Charlop-Christy et al(^4), Nikopoulos et al(^1), Brook(^2), Corbett et al(^3), Charlop-Christy et al(^10), Scattone(^11), Nikopoulos et al(^12), Corbett(^1), Wahoski(^14), Nikopoulos et al(^15), Darden-Brunson et al(^16), Frolli et al(^17), Hong et al(^22)</td>
</tr>
<tr>
<td>Technology-enhanced learning in ASD interventions</td>
<td>Examining the impact of technology-enhanced interventions on academic performance, social skills, and behavior for individuals on the autism spectrum.</td>
<td>Wong et al(^1), Sherer et al(^2)</td>
</tr>
<tr>
<td>Academic performance improvement through video modeling</td>
<td>Some of the improvements noted in research include enhanced learning of academic skills, increased task completion, improved attention to tasks, and enhanced generalization of learned skills to new academic tasks.</td>
<td>Tetreault et al(^20), Clare et al(^23), Cihak(^24), Prater et al(^25)</td>
</tr>
<tr>
<td>Comparison of different video modeling methods</td>
<td>Comparing different video modeling methods to assess their efficacy in academic performance improvement and technology-enhanced learning in ASD interventions, highlighting the potential variations in implementation and outcomes.</td>
<td>Bellini et al(^8), Wang et al(^9), Wynkoop et al(^18), Cihak et al(^19), Smith et al(^16)</td>
</tr>
<tr>
<td>Comparison of video prompting and video modeling</td>
<td>Video prompting involves using a video to give explicit instructions or prompts to guide an individual’s behavior and elicit a targeted response. Video modeling is the process of presenting an individual with a video depicting someone successfully carrying out a behavior or task. The video serves as a demonstration of the desired behavior or skill, emphasizing imitation and observational learning from the model in the video.</td>
<td>Ogilvie(^21), Cannella-Malone et al(^27)</td>
</tr>
<tr>
<td>Use of video self-modeling for academic responding</td>
<td>The findings showed positive results, as the participant exhibited an increase in correct academic responses without prompting during the VSM intervention. Additionally, the participant demonstrated a decrease in such responses when VSM was no longer being used. Additionally, enhancing the rate of response when the intervention was reintroduced.</td>
<td>Hart et al(^24)</td>
</tr>
</tbody>
</table>

Abbreviations: ASD, autism spectrum disorder; VSM, video self-modeling.
Advantages of Video Modeling for Children With Autism

At its core, basic video modeling entails capturing a video of someone other than individuals with ASD demonstrating the desired behavior or skill. Subsequently, individuals with ASD view this video at a later time. On the other hand, VSM involves individuals with ASD observing a video recording of themselves proficiently executing the targeted behavior or skill.

POVM introduces a first-person perspective video of the desired behavior or skill to individuals with ASD. This unique perspective aims to mimic how the child would perceive the behavior while autonomously engaging in the task. Video prompting, another approach, breaks down the behavior or skill into sequential steps. Each step is recorded, incorporating pauses during which individuals with ASD can attempt the step before progressing to the subsequent one.

Moreover, Darden-Brunson et al proposed diverse methods of presenting visual prompts, including photographs, texts, pictures/line drawings, and symbols. This multifaceted approach allows for tailored and effective prompting strategies to support individuals with ASD in mastering skills.

Enhanced Learning Opportunities

Video modeling offers children with autism enhanced learning experiences. The ability to repeatedly watch videos showcasing targeted social skills provides ample learning opportunities. Learners can pause, rewind, and replay videos at their own pace, fostering better comprehension and retention of the skills being taught. Bellini et al conducted a study that revealed how video modeling interventions resulted in increased social initiations and improved interactions with peers in inclusive settings. Similarly, Charlop-Christy et al found success in teaching social initiations through video modeling, leading to enhanced social interaction skills.

Increased Engagement

Children with autism often face challenges in sustaining attention and engagement using traditional teaching methods. Video modeling introduces a visually captivating and engaging platform that captures learners’ focus, increasing their attentiveness to the demonstrated behaviors. Videos can also be motivating and enjoyable, potentially reducing anxiety compared to face-to-face interactions. Charlop-Christy et al demonstrated that video modeling effectively improved social behaviors like eye contact, turn-taking, and initiating interactions. Nikopoulos et al, a randomized controlled trial study, showcased the efficacy of video modeling in enhancing play skills for children with autism. Moreover, recent research by Clare et al demonstrated the positive effects of video modeling on school-based social skills.

Generalization of Skills

Video modeling’s strength lies in its potential to promote skill generalization. Children with autism often struggle to transfer learned skills to different contexts. By presenting various scenarios and settings, video modeling aids learners in applying acquired skills to real-life situations. This ability to generalize skills is crucial for sustained success. Nikopoulos et al (meta-analysis) and Bellini et al researches both showcased how video modeling improved social skills across multiple domains like communication, play, and social initiations.

In conclusion, video modeling offers numerous advantages for children with autism, including heightened learning opportunities, increased engagement, and the ability to generalize skills. The research from various studies underscores the efficacy of video modeling in enhancing social behaviors and interactions, making...
it a valuable intervention strategy within the realm of autism intervention.

Limitations and Disadvantages of Video Modeling

Limited Individualization

A drawback of video modeling is its lack of individualization. Typically designed for a broad audience, these videos may not address the unique needs and preferences of each child. This absence of customization might diminish the intervention’s effectiveness for specific learners.4

Lack of Real-Time Feedback

Unlike in-person interventions, video modeling lacks real-time feedback. Immediate reinforcement and corrective feedback are absent, which could potentially hinder the child’s learning progress.21

Overreliance on Visual Learning

While capitalizing on visual learning strengths in children with autism, video modeling might unintentionally foster dependence on visual cues. This reliance on visual prompts could limit the child’s ability to apply social skills in real-life situations where visual cues aren’t present.24,25

Ethical Considerations

Implementing video modeling requires careful ethical considerations. Obtaining informed consent from parents or guardians is essential, along with ensuring the child’s privacy and confidentiality. Additionally, adherence to ethical guidelines and regulations regarding video usage is paramount.13,14

Lack of Personalization

Video modeling often employs prerecorded videos that may not align with each child’s specific needs and interests. Personalization is crucial for engaging children with autism and boosting their motivation to learn social skills. Without personalization, the effectiveness of video modeling could be limited.26

Limited Feedback and Reinforcement

Video modeling offers visual feedback through observed behaviors. However, the absence of immediate feedback can make it challenging for children with autism to gauge their imitation accuracy.14 Real-time feedback and reinforcement are vital for effective skill acquisition.

Challenges and Generalizability

This aspect explores potential challenges impacting the generalizability of video modeling. These include consistent access to technology, resource limitations, and the need for skilled professionals to design and implement video modeling programs.27 Moreover, the transfer of skills learned via video modeling to real-life social interactions may vary depending on individual factors.

In conclusion, video modeling, while beneficial, isn’t without limitations. It’s essential to consider individualization, real-time feedback, potential overreliance on visuals, ethical concerns, personalization needs, feedback mechanisms, and challenges in implementing and generalizing skills. Acknowledging these limitations helps develop a more comprehensive understanding of the scope and boundaries of video modeling as an intervention strategy.

Recommendations for Effective Video Modeling Implementation

Combination of Video Modeling and Real-Life Practice

To optimize the impact of video modeling, integrate real-life practice opportunities.24,25,28 Complement video lessons with role-playing, peer interactions, and community-based activities that reinforce the skills
learned from the videos. This holistic approach enhances skill transfer to practical situations.

**Individualized Instruction and Progress Monitoring**

Customize video modeling interventions to match the specific needs and capabilities of each child. Regularly assess progress and monitor development to identify areas that require further attention. Adjust the intervention plan accordingly to ensure targeted skill enhancement.

**Gradual Fading of Visual Cues**

Encourage skill generalization by gradually reducing reliance on videos and visual cues. Support children in applying acquired skills independently, helping them navigate diverse situations where visual prompts may not be available. This promotes adaptability and real-world application.

**Collaboration with Parents and Educators**

Engage parents and educators as active partners in the video modeling process. Collaborative efforts ensure consistent reinforcement of social skills across different settings. Sharing insights, strategies, and progress updates fosters a comprehensive and supportive learning environment.

In conclusion, effective implementation of video modeling involves the seamless integration of real-life practice, personalized instruction, gradual fading of visual cues, and collaborative engagement with parents and educators. By following these recommendations, the potential of video modeling as an intervention strategy can be maximized, leading to enhanced social skill development in children with autism.

**Conclusions**

Based on the evidence analyzed, video modeling is a successful intervention strategy for enhancing social skills in individuals with ASD. Video modeling stands as a valuable intervention strategy for enhancing the social skills of children with autism. The approach’s advantages, such as increased learning opportunities, heightened engagement, and skill generalization, offer promising avenues for addressing the social communication challenges characteristic of autism. However, it is crucial to acknowledge and address potential disadvantages and limitations to ensure the strategy’s optimal effectiveness.

The use of technology such as tablet devices appears promising when integrating videos into activity schedules designed to teach appropriate social interactions. Although direct comparison between different forms of video modeling was not always possible due to methodological differences across studies, individual reports consistently show positive outcomes associated with their respective implementations.

Despite the potential benefits, challenges like limited individualization, lack of real-time feedback, overreliance on visual cues, ethical considerations, and implementation hurdles need careful consideration. By addressing these concerns, the application and impact of video modeling interventions can be further refined.

Given the diversity within ASD populations and the various video modeling approaches studied, there is an implicit recommendation for personalized adaptations to ensure optimal alignment between the instructional methodologies used via video modeling and the specific learning profiles of individuals with ASD seeking to enhance their social competencies. The empirical evidence derived from research studies underscores video modeling’s efficacy in ameliorating social skills in children with autism. Future research endeavors should focus on developing strategies to mitigate the identified limitations and optimize the use of video modeling for teaching social skills. Moreover, exploring the long-term effects of video modeling on social development in children with autism holds significant promise.
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Using video self-modeling 
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บทความนี้มุ่งเน้นไปที่การใช้แบบจำลองวิดีโอ (Video modeling) เป็นแนวทางการสอนสำหรับเด็กออทิสซึม (Autism) ผู้มุ่งหมายคือ การตรวจสอบข้อดี และข้อเสียของการใช้แบบจำลองวิดีโอที่มีจุดยืนในประเทศไต้หวัน ซึ่งเหล่านี้เป็นการใช้หลักทฤษฎีในการใช้ที่มีวิธีแสดงพฤติกรรมและความสามารถที่ดีของการจากฐานข้อมูลทั้งหมด 3 ฐานข้อมูล คือ APA PsycNet, Springer, และ Eric พบว่า มีงานวิจัยที่เกี่ยวข้องกับการใช้แบบจำลองวิดีโอเพื่อเป็นแนวทางการสอนเด็กออทิสซึมด้านทักษะทางสังคม จำนวน 28 เรื่อง ซึ่งประกอบไปด้วยข้อมูลเชิงลึกที่เกี่ยวกับประโยชน์ของการรับแบบจำลองวิดีโอ ครอบคลุมโอกาสในการเรียนรู้ที่ดีที่สุด การมีความรู้และความสามารถในการอธิบายเหตุที่สถานะ นอกจากนี้ บทความนี้ยังนำเสนอผลการวิจัยของข้อมูลที่มีค่าสำคัญทางสังคมในเด็กออทิสซึม รวมถึงให้ข้อมูลที่เกี่ยวข้องกับการใช้แบบจำลองวิดีโอที่เหมาะสมกับเด็กออทิสซึมอีกด้วย

คำสำคัญ: แบบจำลองวิดีโอ ออทิสซึม ทักษะทางสังคม

Rama Med J: doi:10.33165/rmj.2024.47.2.266424

Received: November 21, 2023 Revised: March 7, 2024 Accepted: April 3, 2024