Research in Autism Spectrum Disorders 8 (2014) 746–758

Contents lists available at ScienceDirect

Research in Autism Spectrum Disorders

Journal homepage: http://ees.elsevier.com/RASD/default.asp

Review

An analysis and review of the literature and a three-tier video modeling intervention model

Hui-Ting Wang [a,*], Takanori Koyama [b]

[a] National Taiwan Normal University, Taiwan
[b] University of Washington, United States

ARTICLE INFO

Article history:
Received 15 December 2013
Accepted 14 March 2014
Available online 19 April 2014

Keywords:
Video modeling
Autism
Three-tier model

ABSTRACT

Many video modeling (VM) studies for teaching learners with autism have been published. Most studies have investigated the effectiveness of intervention; however, not all learners with autism respond to intervention in the same manner, and not all families and educators can afford such treatments. It is equally critical to address the delivery type of VM and the resources and support involved. This paper had 2 purposes: first, to review and analyze the literature regarding the characteristics of VM intervention and the video components for assisting practice and research; second, to develop a 3-tier VM intervention model (self-administered generic VM, group-based instruction, and individually administered individualized VM), based on the delivery types of intervention and the allocation of resources and support to address the factors that influence learners. Seven intervention characteristics and 7 video components were identified, and implications for future research regarding the 3-tier model were discussed.

© 2014 Elsevier Ltd. All rights reserved.

Contents

1. Introduction . . . 747
2. Methods . . . 748
   2.1. Literature search procedures . . . 748
   2.2. Systematic coding . . . 748
3. Analysis results and implications . . . 748
   3.1. (A) Target skills . . . 748
   3.2. (B) The number of participants with ASD and their ages . . . 752
   3.3. (C) Intervention settings . . . 752
   3.4. (D) Types of video modeling used . . . 752
   3.5. (E) Video length . . . 752
   3.6. (F) Individualized or generic video modeling . . . 753
   3.7. (G) Video components of the VM strategy . . . 753
      3.7.1. (g1) Requirement of prerequisite skills . . . 753
      3.7.2. (g2) Reinforcement for the video model or target learner . . . 753
      3.7.3. (g3) Repetition of VM instruction . . . 753
      3.7.4. (g4) Multiple exemplars . . . 753
      3.7.5. (g5) Narration . . . 754

* Corresponding author. Tel.: +886 277345019.
E-mail address: tinaw@ntnu.edu.tw (H.-T. Wang).

http://dx.doi.org/10.1016/j.rasd.2014.03.010
1750-9467/© 2014 Elsevier Ltd. All rights reserved.

3.7.6. (g6) Scripted or unscripted content . . . 754
3.7.7. (g7) Task analysis . . . 754
4. The three-tier video modeling intervention model . . . 754
4.1. Primary tier: Self-administered generic VM for all learners responding to interventions that require the least amount of resources and support . . . 754
4.2. Secondary tier: Group-based instruction for learners responding to interventions that require a moderate amount of resources and support . . . 754
4.3. Tertiary tier: Individually administered individualized VM for learners responding to intervention that requires the most amount of resources and support . . . 756
5. Conclusion . . . 756
Acknowledgements . . . 756
References . . . 757

1. Introduction

Attention focused on the field of video modeling (VM) for autism spectrum disorders (ASDs) is intensifying in the current decade. Through video, VM provides an antecedent stimulus and primes learners to predict and become familiar with a future activity or task (Bainbridge & Myles, 1999; Schreibman, Whalen, & Stahmer, 2000). Previous studies have shown that VM can be used to teach a variety of skills to a variety of populations (Baker, Lang, & O'Reilly, 2009; Hitchcock, Dowrick, & Prater, 2003). Specifically, based on the standards provided by the Council for Exceptional Children (Horner et al., 2005), VM is an evidence-based instructional strategy for people with ASD (National Professional Development Center on Autism Spectrum Disorders, 2013). Sigafoos, O'Reilly, and De La Cruz (2007) argued that compared with other evidence-based interventions, when videos are readily available, VM requires less expertise to implement and simplifies instruction standardization. Gena, Couloura, and Kymissis (2005) shared a similar opinion, stating that VM requires minimal effort to implement and maximizes the consistency and replication of interventions within a study. Rayner, Denholm, and Sigafoos (2009) also suggested that VM is more cost-effective than other instructional strategies. One advantage of the VM strategy is that all the necessary stimuli and instructions can be included in the same video. For example, a video on hand washing can focus on hands and exclude other unnecessary environmental stimuli, narrate all the steps of hand washing complemented by subtitles, and praise the model child after task completion. If modeled by the learners themselves, video technology enables the elimination of teacher prompts and inappropriate behaviors, such as crying.

Another potential benefit of VM is that learners can be instructed by showing a video instead of trained personnel, which facilitates self-administration. Once a video starts to play, students can learn from the video with little supervision. Meanwhile, teachers and parents can spend extra time on developing and preparing additional educational opportunities, particularly when videos have already been prepared. Researchers have discovered that videos alone, which consist of a complex component package, can be used to teach students with ASD a task or skill that consists of multiple steps without involving further instructions or prompts, which promotes greater independence among individuals with ASD (Rosenberg, Schwartz, & Davis, 2010). Because many children with ASD enjoy watching videos, VM is a potential self-learning tool and a leisure activity that also encourages independent performance.

Many autism-focused, meta analysis studies (Bellini & Akullian, 2007; Mason et al., 2013; Mason, Ganz, Parker, Burke, & Camargo, 2012) and systematic literature reviews (Ayres & Langone, 2005; Delano, 2007; Hitchcock et al., 2003; McCoy & Hermansen, 2007; Mechling & Moser, 2010; Rayner et al., 2009; Shukla-Mehta, Miller, & Callahan, 2010) have (a) provided an overview of VM strategy, (b) demonstrated the effectiveness of VM with a wide range of people with and without disabilities, (c) analyzed the preference for types of video models (e.g., self, peer, adult, subject-point-of-view) or the effectiveness of each type of model, and (d) evaluated the effectiveness of using VM in the domain of social and communication skills training. Based on the knowledge currently available in the literature, we determined at least two dimensions that require contribution.

First, many studies have used packaged components suggested for component analysis, but the information regarding the video developing process and video components was insufficient to evaluate (Delano, 2007; Mason et al., 2013); it is typically unclear what was included or excluded as a component because of researchers' innocence of self-determining. The purpose of this systematic literature review and analysis was to thoroughly understand the VM intervention characteristics and video components used in each study. The findings of this study can facilitate the design of VM intervention protocols and the development of VM videos by skilled personnel. In addition, they can also be used as prompts to assist researchers accurately describing procedures and components. This clarity is required to further enhance external validity, treatment fidelity, and component analysis. Moreover, future research directions were discussed based on the results of the analysis.

Second, whereas the primary investigations were targeted on the scope of the effectiveness of VM, it is equally critical to address the types of delivery method (e.g., self-administered vs. personnel-administered; individual vs. group instruction; at home vs. at a clinic or school) and the amount of resources and support involved (e.g., numbers of personnel required; the amount of skill, money, and time required; generic or individualized instruction) that influenced the usability and feasibility of VM. Based on the diverse characteristics of the learners with ASD, caregivers, and service providers, such as socioeconomic status, strengths, needs, values, desires, and available resources, not all require, prefer, or can afford the same delivery methods

Download English Version:

https://daneshyari.com/en/article/370246

Download Persian Version:

https://daneshyari.com/article/370246

Daneshyari.com