Overcoming Challenges

Going Mobile With Your Own Video Models

Christina R. Carnahan, James D. Basham, Jennifer Christman, and Aleksandra Hollingshead

Ms. Heller is a middle school intervention specialist who is planning weekly trips to the local library for her seventh-grade students with disabilities. She knows that successful community activities require comprehensive planning and organization. While contemplating the instructional targets and accommodations necessary for these weekly trips, Ms. Heller considers the individual needs of each of her students. She is particularly focused on Connie, a student who consistently struggles with transitions and changes in her schedule. As part of her planning, Ms. Heller considers possible interventions to support Connie's participation during their library visits.

Technological innovations in recent years have provided special educators with new and creative strategies for implementing interventions for students with disabilities. Video modeling is one such instructional technique. Essentially, video modeling provides students with a video that illustrates the context and steps required to complete a desired behavior (Bellini, Akullian, & Hopf, 2007). Traditional video modeling involves a student (or a group of students) watching a video on a computer or television screen and having an opportunity to reproduce the desirable behavior in an authentic setting. For example, a video may depict behaviors appropriate for field trips, tasks at work, activities at home (e.g., getting ready to go to school or work), and experiences across school environments. Not surprisingly, providing students with a contextualized model of behavior and encouraging them to practice that same behavior has been shown to be generally effective in multiple learning environments (Cihak, Fahrenkrog, Ayres, & Smith, 2010). This article highlights the research supporting video modeling, discusses constraints associated with traditional video models, and provides solutions for overcoming such challenges.

What Do We Know About Video Modeling?

The National Professional Development Center on Autism Spectrum Disorders (NPDC on ASD) suggests that video modeling is effective for preschool through middle school students, with emerging evidence for learners at the high school level (Franzone & Collet-Klingenberg, 2008). Recently, researchers conducting reviews have evaluated the effectiveness of video modeling (e.g., Bellini et al., 2007; Hume, Loftin, & Lantz, 2009; McCoy & Hermansen, 2007) and have demonstrated that video modeling is effective with a wide age range of students with varying abilities. For example, video models have been used to teach academic, social, and communication skills, and to support positive behavior (Hitchcock, Prater, & Dowrick, 2004; LeBlanc et al., 2003). Table 1 provides examples of the effective use of video modeling.

Moreover, students with disabilities often have difficulty initiating, maintaining, and generalizing skills across learning environments (Banda, Matuszny, & Turkan, 2007; Hume et al., 2009), and video models can support these needs. In addition, these students may struggle to attend to traditional instruction (Council for Exceptional Children, 2005), especially when instruction only occurs verbally (Mesibov, Shea, & Schopler, 2005). Video modeling offers a way to provide multiple means of representing information and an alternative to teacher-led instruction by providing students concrete examples and support, thus decreasing dependence on adult prompts. Overall, video modeling is a relatively user-friendly strategy for increasing teacher efficiency and effectiveness (Banda et al., 2007; Van Laarhoven, Johnson, Van Laarhoven-Myers, Grider, & Grider, 2009).

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What Concerns Exist With Traditional Video Modeling?

Despite the effectiveness of video modeling, until recently video models have been limited by the portability of the equipment (Nikopoulos & Keenan, 2004). Thus, the use of video models was limited to settings with televisions or computers with the ability to play back the video. Although some researchers have used laptops to integrate video models (Cihak, Kessler, & Alberto, 2008), integration across environments has been challenging. In a traditional use of video models, the student would view the video on a television or computer in one location and then be expected to generalize the skill to a different setting, such as across the classroom or even in a different location or environment entirely.

Moreover, the ability to create video models was also hindered by the same equipment concerns. Traditionally, video models required the need for a relatively expensive video camera, the ability to import the video into a computer, time to edit, and time for exporting to the appropriate format for viewing (e.g., DVD or computer). The process also required the individual making the video to have the equipment on location, thus hindering just-in-time or on-the-fly (i.e., in the moment, for immediate use) video model creation. Overall, video modeling can be successful; however, until recently equipment limited both the portability and timeliness of video models in authentic settings. This limitation made the use of video models inaccessible for many students, teachers, and environments.

How Can Mobile Devices Help?

The birth of mobile and relatively inexpensive devices, including Apple's iOS devices such as the iPhone, iPod Touch, and iPad, has provided teachers a way to integrate both planned and just-in-time mobile video models across students' school days and in the community. Researchers have tentatively suggested that mobile

Table 1. Research on Video Modeling

Skill	Authors	Participants	Age	Setting
Social engagement	Bellini, Akullian, & Hopf, 2007	2 males with autism	4–5 years old	Preschool classroom
Social initiations Tantrums Language	Buggey, 2005	10 students with autism	5–11 years old	Private school classroom
Schedules	Cihak & Ayres, 2010	4 students with autism (3 males, 1 female)	11–13 years old	Special education classroom
Within school transitions	Cihak, Fahrenkrog, Ayres, & Smith, 2010	4 individuals with autism (3 male, 1 female)	6–8 years old	Across settings in elementary school
Independent decision making	Davies & Stock, 2004	40 adults with intellectual disabilities	18–54 years old	Office building for supported employment
Classroom rules	Lang, Shogren, Machalicek, Rispoli, O'Reilly, Baker, . . . Regester, 2009	2 males with Asperger's syndrome	5 years old	Small, private, specialized school
Perspective taking skills	LeBlanc, Coates, Daneshvar, Charlop-Christy, Morris, & Lancaster, 2003	3 males with autism	7–13 years old	Afterschool program for 1 student Special education classroom for 2 students
Compliment giving	Lowy-Apple, Billingsley, Schwartz, & Carr, 2005	2 males with autism	5 years old	Preschool classroom
Fire extinguishing	Mechling, Gast, & Gustafson, 2009	3 students (2 females and 1 male) with intellectual disabilities	19–21 years old	Kitchen and barbecue area of apartment
Social initiations	Nikopoulos & Keenan, 2004	3 males with autism	7–9 years old	Experimentation room and playroom
Social sequences	Nikopoulos & Keenan, 2007	3 males with autism	6–7 years old	Assessment room within a specialized school
Self-help skills	Norman & Collins, 2001	3 students (1 female with Down syndrome, 1 male with Down syndrome and 1 male with autism, attention deficit hyperactivity disorder and moderate cognitive disabilities)	8–12 years old	Self-contained special education classroom
Transition-related tasks	Riffel, Wehmeyer, Turnbull, Lattimore, Davies, Stock, . . . Fisher, 2005	4 individuals (2 females with moderate intellectual disability, 1 male with autism and obsessive compulsive disorder, 1 female with Prader Willi Syndrome)	16–20 years old	Cafeteria Dining room Local restaurant Home
Conversation skills	Sherer, Pierce, Paredes, Kisacky, Ingersoll, & Schreibman, 2001	5 males with autism	3–11 years old	For 4 students at home For 1 student at home and research laboratory
Daily-living skills	Shipley-Benamou, Lutzker, & Taubman, 2002	3 individuals with autism (2 males, 1 female)	5 years old	Assessment room

continues

Table 1. *Continued*

Skill	Authors	Participants	Age	Setting
Microwave use	Sigafoos, O'Reilly, Cannella, Upadhyaya, Edrisinha, Lancioni, . . . Young, 2005	3 adult males with developmental disabilities	34–36 years old	Kitchen
Daily living	Van Laarhoven, Kraus, Karpman, Nizzi, & Valentino, 2010	2 males with autism and mild to moderate intellectual disabilities	13–14 years old	Across settings in middle school
Spontaneous requesting	Yingling Wert & Neisworth, 2003	4 males with autism	3–6 years old	Preschool classroom

devices are effective tools for increasing independence and learning (Cihak et al., 2010). Cihak and colleagues described several possible benefits of video modeling via mobile devices, including (a) exposure to video model immediately before the behavior is expected, (b) repeated access in a variety of authentic settings, and (c) size and portability of devices. In addition, these devices offer a great deal of flexibility for supporting independence and self-determination. For example, after viewing a video model on an iPod, a student could place the iPod in his pocket and listen to the video voiceover replay through headphones while using built-in single-switch, gesture, or voice controls to advance, replay, or stop the video. In a gym class, a student might place his iPod in an armband and wear the band throughout the class. He could then listen to the voiceover from the video as needed. Another aspect of flexibility relates to the additional features offered by mobile devices. Students can use these devices not only to access video models, but also to use various applications to successfully complete any number of activities, including managing daily schedules, completing assignments, and communicating with others.

After familiarizing herself with research on video modeling, Ms. Heller decides that Connie may benefit from such an intervention. Ms. Heller considers the disruptions to Connie's typical schedule and routines that will result from the library trips. After thoughtful consideration, she believes that video modeling could positively affect Connie's difficulty with these transitions. Knowing that many of the activities at the library are new to Connie, Ms. Heller decides that video modeling could help introduce the new activities and skills. Ms. Heller knows that one instructional target will be for Connie to check out a book, CD, or movie each week, and she begins to think about how she could target this task with video modeling. Before she can begin to plan for and design Connie's video models, Ms. Heller considers the logistics of the intervention. She could show the video model on a classroom computer before the trip, but she is concerned about how much time would elapse between Connie's viewing of the video model and the opportunity to perform the task at the library. Given Connie's struggles with generalizing information from one environment to another, showing the video model on a classroom desktop prior to the trip could minimize the effectiveness of the video model. Ms. Heller then considers bringing her laptop along on the trip, but decides that using the laptop in the checkout line at the library could be cumbersome and intrusive. After a thorough consideration of the advantages of mobile technology, Ms. Heller decides to go with mobile video modeling to ensure Connie's access to the video in a natural setting. Ms. Heller is ready to create her own video models.

Video modeling offers a way to provide multiple means of representing information and an alternative to teacher-led instruction by providing students concrete examples and support, thus decreasing dependence on adult prompts.

What Is Involved in Creating the Video?

Both Banda et al. (2007) and LaCava (2008) identified steps for creating and using video models. However, before beginning the process, it is important to first determine the most appropriate type of video model. Several types of video models including self, other (peer or adult), and subjective, or first person viewpoint, are options when creating video models; however, for many students, it appears that there is little difference among the use of the different types of models (McCoy & Hermansen, 2007; Van Laarhoven et al., 2009). However, some students may respond better to one type of video model over others. For example, some learners truly enjoy or benefit from seeing themselves as the model (video self-modeling) whereas others prefer not to see themselves in the video. Thus, a critical step in creating successful

video models is identifying the type of video model that will work for specific students. In Table 2, we applied the steps discussed by Banda et al. and LaCava to mobile technology to offer specific guidelines for creating and using mobile video models.

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Ms. Heller knows that a detailed task analysis of the steps involved in checking out material at the library is a critical first step in developing a video model (see Figure 1).

Ms. Heller ensures that the task analysis is unique to Connie's needs, such as providing specific details to help with independent initiation. Ms. Heller also decides to utilize her task analysis table as a data collection sheet so she can document Connie's behavior each weekly trip and compare data across time. Ms. Heller next considers identifying and training the model(s) for the video. Having successfully used pictures of peers and adults to demonstrate simple behaviors for Connie in the past, Ms. Heller decides that an adult could perform the video model. Together with Mr. Lee, the classroom teaching assistant, Ms. Heller decides to record the video during Thursday's preparation period. She presents Mr. Lee with the task analysis to allow him to familiarize himself with all the required behaviors. Then they walk the short distance to the community library and record each step of the task analysis for the video model. They record the video with a classroom flip camera. They take several clips and, upon returning to the classroom, work on editing. They view the clips on their classroom computer and edit the video by putting the clips together and cutting out a few seconds of recorded prevideo conversation. They do not want their video model to contain anything that could potentially distract Connie from the focus of the model. Finally, Ms. Heller shares the movie by file transfer to herself and Mr. Lee. Of course, she understands the importance of confidential information (see U.S. Department of Education, 2011), and therefore is careful to share the video file only with individuals who require access for instructional purposes. After sharing the file, the video model opens as a video on her iPhone while Mr. Lee easily opens and views the video on his Android phone. Ms. Heller is also able to view the video on the classroom iPod. This ensures that Connie will have access to the video on multiple devices in case of any unpredicted instances such as breakage, a teacher absence, or a dead battery. Although each of the devices has different benefits and drawbacks, they are similar enough that, with practice, Connie and her teachers will be able to access the video on all of the devices.

What Is the Best Device to Use?

An important consideration for teachers is the type of device to use for mobile video modeling. Each type of device offers specific features that make it more or less capable for video modeling and use in the classroom. Considerations for purchasing a device for the classroom or student use might include

- Needed hardware features: the quality and size of the display, built-in camera (video and still), microphone, and speaker for quickly developing and playing video models.
- The ability to take video as well as edit video on the device itself. This allows someone to develop on-the-fly or just-in-time videos for students in dynamic situations.
- The ability to access education-focused and utility applications, videos, and audio for use across the learning environment.
- System accessibility and restriction control features. Each device has specific features for both accessibility and restriction. Consider what built-in accessibility features the device has (e.g., single touch button for turning on/off voiceover). Also reflect on whether you can provide students a safe operating environment by establishing user restrictions (e.g., downloading explicit material).
- The ability to sync multiple devices with a single application or video download. This avoids having to buy the single application or download a movie more than one time.

With some forethought, the integration of mobile devices and mobile video models can be a painless process. In order to provide the best outcomes, it is important to consider the needs of the students, the level of reinforcement required, and the actual device features.

Let us now follow the implementation of mobile video modeling. In order to prepare Connie for the field trip, Ms. Heller sends home a copy of the video on a DVD and asks the parents to view it with Connie at night. In addition, Ms. Heller shows the video to Connie just before she prepares to check out materials and exit the library.

How to Measure Students' Progress and Solve Problems

Ongoing progress monitoring is a critical component of any intervention (Stecker, Fuchs, & Fuchs, 2008). The task analysis developed in the beginning of the process serves as the foundation for evaluating the effectiveness of a video model on specific behaviors.

Table 2. Creating Mobile Video Models

Category	Step	Considerations
Planning	1. Identify targeted behaviors and determine the type of video modeling to be used. 2. Train models. 3. Prepare/gather equipment. 4. Collect baseline data.	Banda, Matuszny, and Turkan (2007) suggest interviewing parents and observing the student to create effective video models. These observations and interviews may also be useful in determining the type of video modeling that will be most effective for individual learners. Another critical planning component is to obtain permission from parents and others involved in the video modeling process.
Creation	5. Record targeted behavior. 6. Edit the video. 7. Review the video model to ensure quality and alignment with individual learner needs. 8. Transfer video to mobile device.	No matter the accessibility or quality of the device, if a video model does not clearly represent the targeted behavior in a way that meets the needs of the individual learner (e.g., the type or length of model), the intervention will likely be unsuccessful. Some mobile devices allow for recording and editing the video directly on the device. Others require video to be transferred to a computer, edited, and then loaded on the device.
Implementation	9. Collect baseline data before implementing the video model. 10. Teach student to use the mobile device. 11. Implement video model.	In order for video models to be effective, students must be able to access and use the technology on which the model is presented. As with other instructional materials, students may need systematic instruction to use mobile devices. For example, Cihak, Fahrenkrog, Ayres, and Smith (2010) found least-to-most prompting to be an effective strategy for teaching students to use these devices.
Progress Monitor	12. Collect intervention data. 13. Analyze and modify instruction based on data.	To see if the video model was successful, collect intervention data on how the students perform with the model. Then analyze the data and redesign as necessary. If a student is not making progress, several factors may be at play. Considerations related to the targeted behavior, student's needs, and the video are necessary. Questions to consider include: 1. Was the targeted behavior chosen achievable for the student (i.e., does he have the necessary prerequisite skills)? 2. Does the video align with the needs of the learner (i.e., does the length of video match attention span? Is the model someone the student is interested in attending to)? 3. Does the learner need additional prompts outside of the video model? 4. Is the design of the video effective for teaching the targeted skills (i.e., does the video clearly demonstrate the targeted behavior)? 5. Are there any challenges related to the mobility of the device on which the student views the video (e.g., is the screen too small)?

Ms. Heller decides to take the task analysis data sheet with her to each library trip. In order to ensure consistency, she asks Mr. Lee to take data on Connie's performance after watching the mobile video model. Upon returning to the classroom, she enters the data into an electronic spreadsheet to measure Connie's progress over time.

As a part of Connie's reinforcement system, she earns tokens for each step of the task analysis completed independently. Connie then exchanges the tokens for activities during her choice or break time. Each week, Ms. Heller transfers the data into a graph to view Connie's progress.

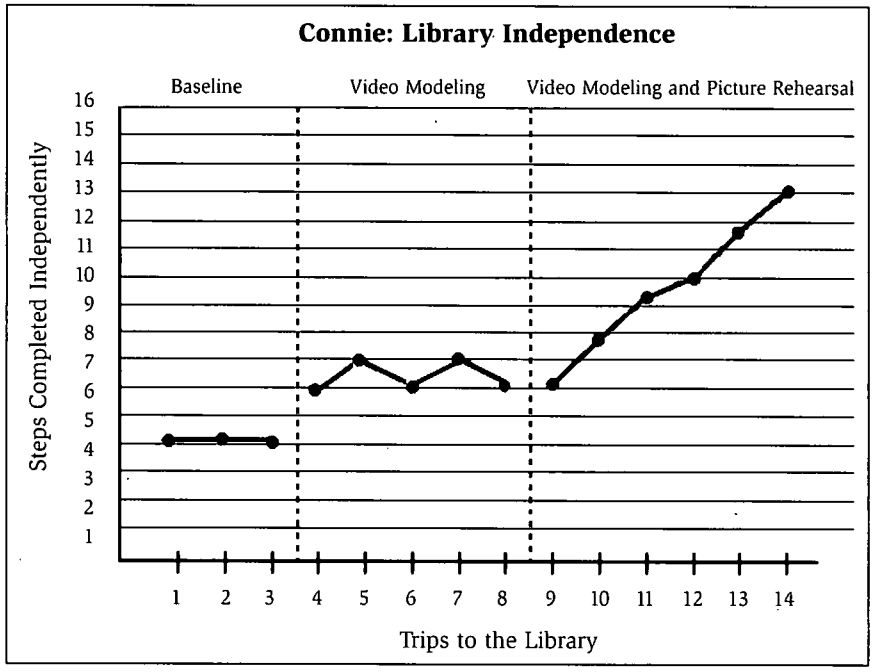
Although data collection is the first step, ongoing analysis and problem solving are necessary for ensuring learning progress. Figure 2 shows Connie's progress over time when the mobile video model was used as an intervention. However, not all learners make consistent progress. Using LaCava's (2008) problem-solving

Figure 1. A Task Analysis and Data Sheet for Library Outings

ACTIVITY STEPS	DATE (insert ✔ if completed independently, and **P** if prompts were needed)[a]	DATE (insert ✔ if completed independently, and **P** if prompts were needed)[a]	DATE (insert ✔ if completed independently, and **P** if prompts were needed)[a]	DATE (insert ✔ if completed independently, and **P** if prompts were needed)[a]	DATE (insert ✔ if completed independently, and **P** if prompts were needed)[a]
Choose one item (book, CD, or movie)					
Take item to line for the check-out desk					
Wait in line if necessary					
When called, walk to the check-out desk					
Say "hello"					
Give item to librarian					
Take library card out of wallet					
Give library card to librarian					
Wait while librarian scans card and item					
When librarian hands back the library card, take it					
Say "thank you"					
Put library card back in wallet					
When librarian hands back item, take it					
Say "thank you"					
Walk to the door					
Stop and wait at the door					

Note: [a]This data sheet may be adapted to include specific prompting levels (e.g., verbal, gesture, or physical prompts).

Figure 2. Connie's Library Data



questions as the basis, we suggest the following questions for problem-solving skills taught via mobile video modeling:

- Is the learner watching the video frequently enough and in the context where the targeted behavior is expected or immediately before the behavior is expected?
- Is the video clear and focused on the actual targeted behavior? Is the video too complex?
- Is the learner able to manage the technology without being distracted or confused?
- Is the learner attending to the relevant parts of the video without being distracted by environmental factors or other applications on the device?
- Does the learner have enough opportunities to practice the targeted behavior?
- Does the learner need to watch the video model during the routine or targeted behavior? Would the learner benefit from listening to voiceover from the video while completing the routine or targeted behavior?
- Are the necessary reinforcements in place to promote high levels of motivation? Does the learner receive reinforcement for attempting the targeted behavior?
- Are additional prompts or teaching strategies necessary to promote learning?

After reviewing the data from the fourth trip to the library, Ms. Heller was not satisfied with the progress Connie was making. She decided to meet with Mr. Lee. Together, they reviewed the data graph and the data sheets from each session. Connie was clearly getting stuck; she consistently needed several prompts to perform each step after greeting the library clerk. However, even after reviewing the problem-solving questions, they were not yet sure why. The video model was clear, there were no obvious distractions, and Connie was attentive when she watched the video.

During the next trip to the library, Ms. Heller used the camera on her phone to record Connie as she completed the sequence. Once more, Mr. Lee provided several prompts for each of the steps after the first six, which was when Connie had to hand her book selection to the librarian. The next day, the teachers met before school to watch the video of Connie at the library and review the problem-solving questions again. Finally, it seemed clear. As soon as Connie handed her book selection to the librarian, she became anxious. Her anxiety seemed to distract her for the remainder of the routine. They began showing the video to Connie several times a day, even on the days Connie didn't go to the library. They frequently rewound the video to show the librarian handing back the book and library card and Connie leaving the library with her book in hand. In addition, after Connie watched the video at the library, Mr. Lee handed her a picture of the librarian handing back her book. At the top of the picture, Ms. Heller had written, "The librarian will return my book and then I will leave the library." Together, Mr. Lee and Connie read the sentence before Connie walked to the desk. After several more trips to the library, the teachers reviewed the data. Connie was making steady progress toward independently completing the routine.

Connie's parents were excited about her success and the effectiveness of the intervention. They soon asked Ms. Heller for help creating video models for family trips to restaurants and stores. Ms. Heller met them at a local restaurant to demonstrate the simplicity of the process using Connie's dad's iPhone. The family identified a specific target and asked Connie's sister to act as the model. They briefly discussed the specific steps in completing the targeted behavior. After practicing a few times,

Regardless of the technology, video modeling requires careful planning, ongoing assessment, and problem solving to be truly effective.

Table 3. Video Modeling Apps and Resources

App or Other Resource	Works With...	Description	Link/Where to Find
National Professional Development Center on ASD: EBP Brief: Video Modeling	Any web-accessible interface	Evidence-based practice brief discussing the effectiveness of video modeling	http://autismpdc.fpg.unc.edu/content/video-modeling
Social Skills Builder web site	Any web-accessible interface	Research overview of video modeling	http://www.socialskillbuilder.com/articles/video-modeling-research.html
Model Me Kids web site	Any web-accessible interface	Overview of the program products with a short description of video modeling	http://www.modelmekids.com/video-modeling.html
First Then Visual Schedules	iPhone, iTouch, iPad	App provides affordable and quickly accessible audio-visual prompting	http://itunes.apple.com/us/app/first-then-visual-schedule/id355527801?mt=8 and iTunes store
Model Me Going Places App	iPhone, iTouch, iPad	Visual teaching tool for helping to navigate through challenging locations in the community	http://www.modelmekids.com/iphone-app-autism.html and iTunes store
Stories2Learn	iPhone, iTouch, iPad	Offers the ability to create personalized stories using photos, text, and audio messages	http://itunes.apple.com/us/app/stories2learn/id348576875?mt=8 and iTunes store
Activity Trainer	Laptop/ desktop	Software program for making video modeling	http://www.dttrainer.com/products/activity-trainer/
Watch Me Learn	DVD on laptop	Software with various video modeling videos ready to use	http://www.difflearn.com/category/video_modeling

Note: ASD = autism spectrum disorder; EBP = evidence-based practice.

Connie's sister performed the routine. Because they met at an off-peak time at the restaurant, there was very little background noise or other distractions. Although it took three attempts, no editing was needed. In addition, Ms. Heller shared a list of resources that offered ready-made video models to use on mobile devices (see Table 3).

Final Thoughts

Video modeling is an evidence-based intervention teachers can develop for students with a variety of support needs. Mobile video models extend traditional video modeling by incorporating the continuously growing number of technologies available in schools. However, regardless of the technology, video modeling requires careful planning, ongoing assessment, and problem solving to be truly effective.

References

Banda, D., Matuszny, R., & Turkan, S. (2007). Video modeling strategies to enhance appropriate behaviors in children with autism spectrum disorders. *TEACHING Exceptional Children, 39*(6), 47–52.

Bellini, S., Akullian, J., & Hopf, A. (2007). Increasing social engagement in young children with autism spectrum disorders using video self-modeling. *School Psychology Review, 36*(1), 80–90.

Buggey, T. (2005). Video self-modeling applications with students with autism spectrum disorders in a small private school setting. *Focus on Autism and Other Developmental Disabilities, 20*(1), 52–63.

Cihak, D., & Ayres, K. (2010). Comparing pictorial and video-modeling activity schedules during transitions for students with autism spectrum disorders. *Research in Autism Spectrum Disorders, 4*(4), 763–771.

Cihak, D., Fahrenkrog, C., Ayres, K., & Smith, C. (2010). The use of video modeling via a video iPod and a system of least prompts to improve transitional behaviors for students with autism spectrum disorders in the general education classroom. *Journal of Positive Behavior Interventions, 12*(2), 103–115.

Cihak, D., Kessler, K., & Alberto, P. (2008). Use of a handheld prompting system to transition independently through vocational tasks for students with moderate and severe intellectual disabilities. *Education and Training in Developmental Disabilities, 43*(1), 102–110.

Council for Exceptional Children. (2005). *Universal design for learning: A guide for teachers and education professionals.*

Arlington, VA: Pearson/Merrill/Prentice-Hall.

Davies, D., & Stock, S. (2004). A palmtop computer-based intelligent aid for individuals with intellectual disabilities to increase independent decision making. *Research and Practice for Persons With Severe Disabilities, 28*(4), 182–193.

Franzone, E., & Collet-Klingenberg, L. (2008). *Overview of video modeling.* Madison, WI: The National Professional Development Center on Autism Spectrum Disorders, Waisman Center, University of Wisconsin. Retrieved from http://autismpdc.fpg.unc.edu/sites/autismpdc.fpg.unc.edu/files/VideoModeling_Overview_1.pdf

Hitchcock, C., Prater, M., & Dowrick, P. (2004). Reading comprehension and fluency: Examining effects of tutoring and video self-modeling on first-grade students with reading difficulties. *Learning Disability Quarterly, 27,* 89–103.

Hume, K., Loftin, R., & Lantz, J. (2009). Increasing independence in autism spectrum disorders: A review of three focused interventions. *Journal of Autism and Developmental Disorders, 39*(9), 1329–1338.

LaCava, P. (2008). *Video modeling: An online training module.* (Kansas City, KS: University of Kansas, Special Education Department). In Ohio Center for Autism and Low Incidence (OCALI), *Autism Internet Modules,* www.autisminternet modules.org. Columbus, OH: OCALI.

Lang, R., Shogren, K., Machalicek, W., Rispoli, M., O'Reilly, M., Baker, S., . . . Regester, A. (2009). Video self-modeling to teach classroom rules to two students with Asperger's. *Research in Autism Spectrum Disorders, 3,* 483–488.

LeBlanc, L., Coates, A. M., Daneshvar, S., Charlop-Christy, M. H., Morris, C., & Lancaster, B. (2003). Using video modeling and reinforcement to teach perspective-taking skills to children with autism. *Journal of Applied Behavior Analysis, 36*(2), 253–257.

Lowy-Apple, A., Billingsley, F., Schwartz, I., & Carr, E. (2005). Effects of video modeling alone and with self-management on compliment-giving behaviors of children with high functioning ASD. *Journal of Positive Behavior Interventions, 7*(33), 33–46.

McCoy, K., & Hermansen, E. (2007). Video modeling for individuals with autism: A review of model types and effects. *Education and Treatment of Children, 30*(4), 183–213.

Mechling, L., Gast, D., & Gustafson, M. (2009). Use of video modeling to teach extinguishing of cooking related fires to individuals with moderate intellectual disabilities. *Education and Training in Developmental Disabilities, 44*(1), 67–79.

Mesibov, G., Shea, V., & Schopler, E. (2005). *The TEACCH approach to autism spectrum disorders.* New York, NY: Kluwer Academic/Plenum.

Nikopoulos, C., & Keenan, M. (2004). Effects of video modeling on social initiations by children with autism. *Journal of Applied Behavior Analysis; 37*(1), 93–96.

Nikopoulos, C. K., & Keenan, M. (2007). Using video modeling to teach complex social sequences to children with autism. *Journal of Autism and Developmental Disorders, 37*(1), 678–693.

Norman, J., & Collins, B. (2001). Using an instructional package including video technology to teach self-help skills to elementary students with mental disabilities. *Journal of Special Education Technology, 16*(3), 5–18.

Riffel, L., Wehmeyer, M., Turnbull, A., Lattimore, J., Davies, D., Stock, S., . . . Fisher, S. (2005). Promoting independent performance of transition-related tasks using a palmtop PC based self-directed visual and auditory prompting system. *Journal of Special Education Technology, 20*(2), 5–14.

Sherer, M., Pierce, K., Paredes, S., Kisacky, K., Ingersoll, B., & Schreibman, L. (2001). Enhancing conversation skills in children with autism via video technology: Which is better, "self" or "other" as a model? *Behavior Modification, 25*(1), 140–158.

Shipley-Benamou, R., Lutzker, J. R., & Taubman, M. (2002). Teaching daily living skills to children with autism through instructional video modeling. *Journal of Positive Behavior Interventions, 4*(3), 165–188.

Sigafoos, J., O'Reilly, M., Cannella, H., Upadhyaya, M., Edrisinha, C., Lancioni, G., . . . Young, D. (2005). Computer-presented video prompting for teaching microwave oven use to three adults with developmental disabilities. *Journal of Behavioral Education, 14*(3), 189–201.

Stecker, P., Fuchs, D., & Fuchs, L. (2008). Progress monitoring as essential practice within response to intervention. *Rural Special Education Quarterly, 27*(4), 10–17.

U.S. Department of Education. (2011). *Family Educational Rights and Privacy Act (FERPA).* Retrieved from http://www2.ed.gov/print/policy/gen/guid/fpco/ferpa/index.html

Van Laarhoven, T., Johnson, J. W., Van Laarhoven-Myers, T., Grider, K. L., & Grider, K. M. (2009). The effectiveness of using a video iPod as a prompting device in employment settings, *Journal of Behavioral Education, 18,* 119–141.

Van Laarhoven, T., Kraus, E., Karpman, K., Nizzi, R., & Valentino, J. (2010). A comparison of picture and video prompts to teach daily living skills to individuals with autism. *Focus on Autism and Other Developmental Disabilities, 25*(4), 1–14.

Yingling Wert, B., & Neisworth, J. T. (2003). Effects of video self-modeling on spontaneous requesting in children with autism. *Journal of Positive Behavior Interventions, 5*(1), 30–34.

Christina R. Carnahan *(Ohio CEC), Assistant Professor, Department of Special Education, University of Cincinnati, Ohio.* **James D. Basham,** *Assistant Professor, Department of Special Education, University of Kansas, Lawrence.* **Jennifer Christman** *(Ohio CEC), Doctoral Student; and* **Aleksandra Hollingshead** *(Ohio CEC), Doctoral Student; Department of Special Education, University of Cincinnati, Ohio.*

Address correspondence concerning this article to Christina Carnahan, Department of Special Education, University of Cincinnati, 2600 Clifton Ave., Cincinnati, OH 45221-0022 (e-mail: Christi.carnahan@uc.edu).

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