Visual scripts and related educational strategies such as video modeling and social script narratives provide visual or auditory cues to promote communication and social skills in children with disabilities. Visual scripts are particularly useful for teachers who work with children with learning disabilities, autism spectrum disorders, and cognitive impairments—both students with average language skills and those with limited verbal skills. What are the benefits of visual scripts? Which student populations benefit most from their use? How does a teacher go about implementing a visual script?

**What Are Visual Script Interventions?**

Visual scripts are written and pictorial examples of phrases or sentences children with disabilities can use to cue themselves regarding appropriate topics of conversation or other verbal interactions. Visual script interventions have been shown to be effective with children with autism, including those with minimal language (e.g., single spoken words, Krantz & McClannahan, 1998) and those with extensive verbal skills but poor social skills (Krantz & McClannahan, 1993); they are often used with children with autism spectrum disorders (Ganz, Cook, & Earles-Vollrath, 2006). Visual scripts are also appropriate for use with children with a variety of communication or social deficits. Scripts can be simple reminders of the words needed to get assistance (e.g., “help,” accompanied by a picture), or provide suggestions for phrases to initiate conversations (e.g., “what’s up?” or “what did you do last night?”). Scripts specific to units of study can help children with speech-language deficits or mild mental retardation expand their vocabulary. Students with learning disabilities or attention deficit/hyperactivity disorder (ADHD) may find visual scripts helpful in social situations to provide them with age- and socially-appropriate phrases (e.g., phrases useful for asking to join a play activity). Additionally, for children with emotional or behavioral disorders, scripts can promote the use of socially appropriate phrases to replace inappropriate language (e.g., cursing, slang).

Students with disabilities who also have limited English proficiency may benefit from visual scripts that include current idioms or slang used by their peers.

**What Does the Literature Say?**

Much of the research supporting the use of scripts demonstrates their use with children with autism spectrum disorders (Charlop-Christy & Kelso, 2003; Krantz & McClannahan, 1993; Krantz & McClannahan, 1998; Sarokoff, Taylor, & Poulson, 2001; Stevenson, Krantz, & McClannahan, 2000) or with such children and their typically developing peers (Goldstein & Cisar, 1992); however, most of this research was conducted with small pools of participants. Research on script interventions (see Table 1) has demonstrated their efficacy with children with a range of abilities, and those with limited verbal abilities (i.e., single-word utterances and minimal reading skills; Krantz & McClannahan, 1998) to those who could speak in complete sentences but had limited use of social skills such as initiating conversations (Krantz & McClannahan,
Scripts have been used to increase initiations toward adults (Charlop-Christy & Kelso; Krantz & McClannahan, 1998); initiations toward peers (Goldstein & Cisar; Krantz & McClannahan, 1993; Sarokoff et al.); requests for attention (Krantz & McClannahan, 1998); unprompted and unscripted statements (Krantz & McClannahan, 1993; Sarokoff et al.); question asking (Krantz & McClannahan, 1993); conversational statements about present items (Sarakoff et al.) and about past or abstract events (Charlop-Christy & Kelso); responding to questions (Charlop-Christy & Kelso; Krantz & McClannahan, 1993); and use of sociodramatic play statements (Goldstein & Cisar). In each case, many or most of the new skills were maintained and generalized to novel settings, conversation partners, or materials.

Implementing Visual Scripts

There are seven basic steps for implementing visual scripts (see Figure 1); the process itself is flexible and adaptable to the ability level and needs of the student (Ganz et al., 2006). Implementation of visual scripts involves choosing target activities and learner objectives, observing typically developing peers engaging in target activities and developing visual scripts, teaching the student to recite the script, and implementing then fading the use of the script. Scripts are most successful when they incorporate student interests and familiar activities and settings and they are easily adapted for a variety of student ability levels and within numerous environments.

### Table 1. Research on Script Interventions

<table>
<thead>
<tr>
<th>Study</th>
<th>Participants Summary</th>
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<tbody>
<tr>
<td>Charlop-Christy &amp; Kelso (2003)</td>
<td>Participants were taught to use question-and-answer scripts consisting of abstract, non-present topics of conversation with an adult; children quickly learned correct scripted responses; many skills were maintained and generalized to new topics of conversation, trainers, and settings</td>
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<tr>
<td>Goldstein &amp; Cisar (1992)</td>
<td>Children were taught sociodramatic play scripts in triads with peers (2 typically developing children with 1 child with a disability); trainers gave verbal prompts/cues; participants learned scripts quickly; social behaviors (e.g., scripted phrases, words, and nonverbal behaviors, and nonscripted behaviors) increased; available online: <a href="http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1297725&amp;blobtype=pdf">http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1297725&amp;blobtype=pdf</a></td>
</tr>
<tr>
<td>Krantz &amp; McClannahan (1993)</td>
<td>Participants were taught to use 10-line scripts to initiate social conversations with peers; scripts were faded over five steps; participants' use of scripted phrases increased and unscripted phrases and responses increased after scripts were faded; available online: <a href="http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1279709&amp;blobtype=pdf">http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1279709&amp;blobtype=pdf</a></td>
</tr>
<tr>
<td>Krantz &amp; McClannahan (1998)</td>
<td>Written cues were inserted in visual schedules and early-reader participants who used few verbal initiations were prompted to approach an adult and say the script; participants increased their use of scripted phrases, elaborations on scripted phrases, and novel initiations; skills generalized to novel activities; available online: <a href="http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1284111&amp;blobtype=pdf">http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1284111&amp;blobtype=pdf</a></td>
</tr>
<tr>
<td>Sarokoff, Taylor, &amp; Poulson (2001)</td>
<td>Participants who could read were taught embedded text that corresponded with snack and play items; scripts were faded after they were mastered; participants increased use of scripted statements and maintained their use after scripts were faded; unscripted statements increased; all statements generalized to new items and peers; available online: <a href="http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1284302&amp;blobtype=pdf">http://www.pubmedcentral.nih.gov/picrender.fcgi?artid=1284302&amp;blobtype=pdf</a></td>
</tr>
<tr>
<td>Stevenson, Krantz, &amp; McClannahan, (2000)</td>
<td>Participants could use expressive language to make requests, use greetings, and respond to demands or questions but infrequently used spontaneous conversational speech; they were taught to engage in conversations regarding present items; participants mastered scripts rapidly, increased the number of unscripted statements, and maintained their use after prompts and scripts were faded</td>
</tr>
</tbody>
</table>

Step 1: Choose a Target Activity

Script interventions are most successful if the target activity is something the student enjoys and is motivated to engage in. What are the student’s interests? Are there any solitary activities that the student has already mastered that can be converted into social activities? (For example, Polo could already take his lunch out of his lunch box, sit in his seat, unwrap each item, eat his lunch, and throw away his trash independently; however, he never spoke to his classmates despite sitting next to them for 2 months.) What activities do typically developing children engage in that the target student does not, because he or she lacks the social or communication skills? Activities that are popular with the student’s peers are good choices for intervention, particu-
larly if an overarching goal is to increase opportunities to integrate the child into settings with typically developing peers.

**Step 2: Observe Typically Developing Children Engaging in the Activity**

Note comments they make, how they initiate conversations, questions they ask, and topics of conversation. It may help to observe during at least three occasions, each time writing verbatim what the child's peers say. This information will assist in determining necessary skills for the child to participate in the target activity and will help determine what phrases should be included in the script.

**Step 3: Choose a Learning Objective**

Before writing the script, determine a specific, measurable learning objective—or more than one, depending on the ability level of the student (Ganz et al., 2006). Learning objectives may be chosen from the child's individualized education program (IEP) or may be activity-specific. Table 2 provides a list of possible scenarios and corresponding learning objectives.

**Step 4: Write the Script**

The length and complexity of the script depends on the ability level of the student (Ganz et al., 2006). Reflecting on information gathered during the observation of typically developing peers engaging in the chosen activity, write a list of sentences or phrases that the student will learn to use during the social activity.

**Step 5: Teach the Script**

The student will need to be able to repeat the visual script sentences or phrases fluently (Ganz et al., 2006). Depending on the reading abilities of the student, the entire script may be taught in one sitting or over several days. At this point, the script may need to be adjusted. For example, Jason was having difficulty remembering 10 phrases and was not able to read them fluently after six sessions of instruction, so his teacher decreased the script to six phrases and added small line drawings to help him remember each phrase.

**Step 6: Implement the Script**

During the target activity, present the script (Ganz et al., 2006; Krantz & McClannhan, 1993). Scripts may be written on note cards or on paper, and include a means for the student to keep track of phrases used, such as check-off boxes in front of each phrase (Krantz &

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**Table 2. Visual Script Scenarios and Learning Objectives**

<table>
<thead>
<tr>
<th>Scenarios</th>
<th>Learning Objectives/Skills</th>
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</thead>
<tbody>
<tr>
<td>Playing board games</td>
<td>• Social greetings&lt;br&gt;• Asking for a turn&lt;br&gt;• Comments necessary to play the game</td>
</tr>
<tr>
<td>Constructive play</td>
<td>• Social greetings&lt;br&gt;• Offering a toy&lt;br&gt;• Asking for help&lt;br&gt;• Complimenting playmates&lt;br&gt;• Comments on current activities</td>
</tr>
<tr>
<td>Sociodramatic play</td>
<td>• Social greetings&lt;br&gt;• Offering a toy&lt;br&gt;• Complimenting playmates&lt;br&gt;• Pretend-play scripts</td>
</tr>
<tr>
<td>Eating a meal or snack</td>
<td>• Offering to share&lt;br&gt;• Comments regarding past events&lt;br&gt;• Comments regarding abstract topics&lt;br&gt;• Using humor&lt;br&gt;• Responding to peers' comments/questions</td>
</tr>
<tr>
<td>Vocational tasks</td>
<td>• Asking for help&lt;br&gt;• Asking for materials&lt;br&gt;• Comments on current activities</td>
</tr>
<tr>
<td>Playing a sport</td>
<td>• Comments appropriate for the sport&lt;br&gt;• Cheering for teammates&lt;br&gt;• Responding to peers' comments/questions</td>
</tr>
</tbody>
</table>
Step 7: Fade the Script

The script can be kept in place if the student relies heavily on visual cues. If possible, however, the script should be faded over time (Ganz et al., 2006). This can be done over several steps. Krantz and McClannhan (1993) recommend removing the script a piece at a time, first removing ending punctuation, then removing portions of the phrases, starting at the end, eventually leaving only bullets or check boxes. Script fading may take place rapidly or over several weeks, depending on the student’s memory skills (Ganz et al.).

Following the implementation of scripts in a number of social situations, the scripts may be faded altogether. However, teachers should periodically collect observational data on the skills acquired as a result of scripts and, if necessary, reintroduce the scripts if the skills were not maintained. Some students begin to use novel phrases as the scripts are faded, whereas others may require implementation of scripts spanning several months.

Variations

Length of the Phrases. Phrases should be kept to one to two words for children who can speak only in short phrases, but should be longer for students with stronger verbal and reading skills. Similarly, early readers and those with minimal verbal skills should be given only a few phrases—possibly only 1 word or phrase—per script; students with stronger reading and verbal skills can use scripts with 10 or more phrases.

Script Format. The script can be audiotaped, written, video, or verbally cued, depending on the student’s learning style. Scripts may include pictures, photographs or line drawings, to assist nonreaders or early readers in remembering the script phrases, or may include only text for fluent readers. In addition to the variety of ways to identify which phrases have been used earlier, a teacher or aide can hold up phrase cards for students who are unable to use scripts independently.

School Scenario

Isa

Isa was a kindergartener with developmental delays and speech impairment attending a general education kindergarten classroom for about half of the day, including lunch, physical education, music, center time, and story time. The rest of the day she was in a self-contained special education classroom where she received intensive one-on-one and small-group instruction. She could speak in one to two-word phrases, answer simple questions, and follow one-step directions; however, she rarely initiated conversations with peers in her kindergarten class, and her vocabulary was significantly limited compared to her peers. During center time, Isa usually played with the blocks. She had previously been taught to make towers and roads to drive cars on, which she did independently. Though other children often played in the same center, Isa did not interact with them. Isa’s teacher, Mrs. Malone, chose playing with blocks as the target activity (Step 1). Before writing Isa’s script, Mrs. Malone watched a few groups of kindergarteners play in the block center over several days and wrote down the phrases they used (e.g., “Here, you can have the long block,” “Look at this!”; Step 2). Isa’s IEP objectives included sharing toys and expressively identifying shapes, so Mrs. Malone chose those as Isa’s main learning objectives (Step 3): Isa would be expected to hand a block to a peer, Sarah, and say, “circle block,” “rectangle block,” or “square block.” (Mrs. Malone chose Sarah to be Isa’s play partner because she had shown an interest in Isa and often asked to be her helper during Isa’s time in the kindergarten classroom.) Next, Mrs. Malone wrote a script for Isa (Step 4; see Figure 2). Prior to implementing the script, Mrs. Malone played in the block center with Sarah for several days, showing her the script, modeling each line, and having Isa repeat each phrase and hand her the identified block (Step 5). Finally, Mrs. Malone

**Figure 2. Isa’s Script**

Circle block (hand circle block to Sarah)

Rectangle block (hand rectangle block to Sarah)

Square block (hand square block to Sarah)
implemented the script with Isa and Sarah (Step 6). The teacher began by taking Isa’s hand and helping her point to each line on the script, then prompting by holding Isa’s arm, and eventually removing any physical or gestured prompts. After Isa was using the script independently, Mrs. Malone faded its use (Step 7); Isa began spontaneously offering blocks to Sarah without looking toward the script.

**Thomas**

Thomas was an eighth-grader with a learning disability and ADHD; he could speak in complete sentences, with grammar and vocabulary at a level comparable to his peers, but had difficulty determining topics of conversation and often sat alone at lunch and other free periods, talking to no one. He attended general education classes and only received special education for content mastery (e.g., as needed for content area instruction and independent work) and for social skills instruction twice a week. Thomas wanted to make friends and have someone to talk to at lunch, so he and his teacher, Mr. Laine, chose eating lunch as a target activity (Step 1). Mr. Laine observed other eighth-grade boys (Step 2) and he and Thomas decided to work on making context-appropriate comments (Step 3), and together wrote a script (Step 4; see Figure 3). Immediately before each lunch period, Thomas would fill in most of the blanks with appropriate words or phrases. His script included more abstract expectations than Isa’s because of his verbal and cognitive strengths. Because Thomas was a fluent reader, he quickly mastered reading his script and checking off each box as he used a phrase (Step 5). Mr. Laine sat far enough away at the lunch table to be discreet, but close enough to hear Thomas and his peers during lunch (Step 6). Finally, Mr. Laine used a script fading procedure to remove portions of each phrase on the script, starting at the end of each sentence, until Thomas was using novel phrases (Step 7).

Written scripts are a promising practice in improving social and communication skills in children with deficits in those areas. They can be modified for almost any age or ability level, offering a means of support to the wide variety of students who receive special education.

**References**


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