This paper discusses the oral and written communication demands of school on children with hearing loss from a script viewpoint, which emphasizes describing the role of actors, actions, props, routines, and possible variations of a given event. The paper first distinguishes among the schema, the script, and the routine. It also considers the role of the parent, teacher, speech-language pathologist, and other special educators in helping children with hearing impairments to develop strong scripts and match appropriate communication to those scripts. Examples of common preschool and school scripts and strategies for teaching the scripts and appropriate communication are provided. Such scripts include beginning the day, recess, reading group, taking tests, show and tell, following teacher directions, sharing information with the teacher, getting clarification, giving directions, and chatting with peers. Guidelines are offered for determining classroom scripts, identifying the teacher's cues for defining and activating the scripts, and determining the child's level of knowledge of the classroom scripts and associated cues. Suggested strategies for helping the child learn a script include outlining the routine with the child, brainstorming variations on the routine, specifying the cues for activating the script, role playing the script, talking through the script as it occurs, and cuing the child within the natural environment. A model for using scripts as a framework for supporting children's language development is provided. (DB)
USING SCRIPTS TO FACILITATE COMMUNICATION OF CHILDREN WITH HEARING IMPAIRMENT

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ABSTRACT

The ability to act and communicate effectively in varied contexts has recently been examined in relationship to the event script which describes the actors, actions, props, routine and possible variations on that routine for a given event. Children with hearing impairment may be especially at risk for failure to develop rich scripts because of the auditory information that they miss. Therefore, attention to providing them with a range of scripts and highlighting the important information is necessary. This paper discusses the oral and written communication demands of school from a script viewpoint and the role of the parent, teacher, speech-language pathologist, and other special educators in helping children with hearing loss develop strong scripts and match appropriate communication to those scripts. Examples of common schools scripts and strategies for teaching the script and appropriate communication are provided.
The ability to act and communicate effectively in varied contexts has recently been examined in relationship to the event script which describes the actors, actions, props, routine and possible variations on that routine for a given event. The idea of event scripts grew out of information about schema theory in cognitive psychology (Shank and Abrahams, 1977). A schema can be defined as a method of organizing information in the brain. A concept is an example of a schema. A script then is a schema for an event which specifies the organization of the event. A routine is that part of the script that can be specified. It is the invariable core of the event. A routine can be taught, but a script is much richer than the information that can be provided by stating the routine. A rich script includes the possible variations on the routine. The following are pertinent definitions for understanding event scripts:

**Schema:** plan for organizing or representing information

**Script:** schema for an event which specifies actors, actions, props, and possible variations. It becomes more elaborate with increased experience

**Routine:** aspects of the script that are constant and that can be identified, stated and/or taught (Creaghead, 1992b, p. 5)

Traveling by air can be used as an example of a script that most of people have encountered (Creaghead, 1990). If someone had never flown, it would be possible to describe the routine for getting through the airport -- where to check luggage, to check in,
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go through security, wait at the gate, board the plane, etc. However, knowing only this routine would not enable travelers to know what to do if their luggage is lost, if they lost their ticket, if their flight was canceled, if they missed their connection. These are all variations on the airport routine that experienced travelers manage easily and without panic, but that are typically learned through experience rather than through explanation. There are three important benefits of knowing the script.

1. It enables us to behave and communicate appropriately and effectively in a given situation.
2. It helps us to feel comfortable in the situation because we know what to do.
3. It frees us from thinking about the script or how to behave so that we can focus on new information rather than on the background script.

Experience is the primary way that children learn scripts. Kathryn Nelson and her colleagues (1986) have demonstrated that very young children develop scripts for events that they experience. Through asking children the question, "What happens when . . . ?", Nelson and her colleagues found that children produced similar and consistent descriptions of familiar events that addressed the goal of the script and were organized causally when such organization was required. For example, in producing a script for a birthday party, the children might provide the
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following three activities in any order because there is no causal order: "You play, games, eat ice cream and cake, and open presents." On the other hand in describing how to make cookies, they would organize the sequence from stirring to baking to eating in the correct order.

The critical issues are (1) experience enables children to develop scripts; (2) experience with possible variations helps to make scripts richer; and (3) the visual and auditory information in addition to the actual participation are extremely important in developing strong scripts. It is logical then, that children with hearing impairment may be at risk for developing impoverished scripts because of the missing auditory information -- especially the wealth of information which occurs incidentally. There are several implications of this theory. First this means that adults must give attention to helping children with hearing impairment learn the script for events that they will encounter.

Analyzing the script for an event can help educators and parents know what the child must know in order to minimally participate in the event. This is the routine, which can be taught. Further attention to the possible variations that occur within the script can provide a foundation for helping the child develop flexibility. This occurs by varying the routine rather than providing the same routine over and over again. Providing experience with potential variations and modeling appropriate communication for those variations is important in helping children
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become flexible communicators.

While it is important for children to learn scripts for social
interactions and community activities, the script for school is
critical. This is especially true for children who are placed in
regular education classrooms. The following is the rationale for
considering scripts when planning intervention for children with
hearing impairment (Creaghead, 1992b, p 17):

1. Classrooms have specific communication patterns which can be
   identified and which children are expected to follow.
2. Some children, including those who are hearing impaired, may
   not be successful in school because they do not know the rules
   for communication there.
3. Understanding the communication demands of the classroom and
   examining children's difficulties in that light can help some
   children be more successful.

The following is a sample list of scripts that children may
encounter in school. The list is not exhaustive.

**Example event scripts**

<table>
<thead>
<tr>
<th>Primary/Elementary School</th>
<th>Preschool</th>
</tr>
</thead>
<tbody>
<tr>
<td>Beginning the day</td>
<td>Arriving</td>
</tr>
<tr>
<td>Going to lunch</td>
<td>Show and tell</td>
</tr>
<tr>
<td>Recess</td>
<td>Snack time</td>
</tr>
<tr>
<td>Games</td>
<td>Cleaning up</td>
</tr>
<tr>
<td>Classroom lessons</td>
<td>Going to the bathroom</td>
</tr>
<tr>
<td>Reading group</td>
<td>Story time</td>
</tr>
</tbody>
</table>
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| Taking tests                      | Free play                  |
| Getting homework assignments     | Dramatic play              |
| Doing homework                   | Making things              |
| Returning homework               | Field trips                |
| Working independently            | Going outside              |
| Completing workbook pages        | Learning centers           |
| Ending the day                   | Going home                 |

(Creaghead, 1992b. p. 13, 14)

Children must learn an overall school script and specific subscripts for events such as those shown above. In addition, they must learn the variations that each teacher imposes on these scripts in her classroom. Schultz (1979) suggests that teachers expect children to know the script for their classroom within the first two weeks of school. In addition to knowing the script, children must know the teacher's cues for activating the script. For example, children may need to know their teacher's script for closing the day -- what they are supposed to take home, where they put their materials, what they hand in, whether they are allowed to leave their seats and get their belongings together, etc. In addition, however, they have to know what the teacher does to let them know that it is time to begin this script. For example, the children may be expected to know that they are to begin getting ready to go home at a certain time each day, or the teacher may announce that it is time to get ready, or she may simply close her book. The student's job is still more complicated than knowing the
Creaghead, Using Scripts to Facilitate Communication script and the cues for activation. Appropriate communication varies with these scripts. The following list shows a sample of communication scripts that may occur or be needed in school.

**Example communication scripts for school**

- Following teacher directions
- Following written directions
- Reading aloud
- Reading for information
- Answering teacher questions in a group
- Getting information/help from teacher
- Sharing information with teacher
- Explaining or defending behavior
- Getting clarification
- Giving reports
- Pretending/role playing
- Show and tell
- Giving directions
- Getting information/help from peers
- Chatting with peers
- Negotiating rules for games/play
- Planning/negotiating group projects

(Creaghead, 1992b, p. 17)

Some of these communication scripts are synonymous with the event script in which they occur. An example is show and tell. The actual script is telling about the object or event that the child
Creaghead, Using Scripts to Facilitate Communication wishes to share. The communication is the core of this script. On the other hand, the child may need to insert a communication script into an event script. -- for example asking for help. The child has to know the appropriate script for asking for help, but in addition, the appropriate time and manner of asking may vary according to the event script. The strategy for asking for help may be different during a lesson than during independent work -- or it may not even be allowed in certain contexts such as taking a test.

Focusing on the event and communication scripts for school is critical for helping children with hearing impairment become effective learners and communicators. There are at least three steps that teachers and other special educators should take in order to help children learn the script and the appropriate communication within it: (1) Determine the actual classroom scripts. (2) Identify the teacher's cues for defining and activating those scripts. (3) Determine the child's level of knowledge of the classroom scripts and associated cues (Creaghead, 1992a).

First, we must analyze the script for the child's classroom. Teachers need to be aware of their own script expectations. Observation by a second person -- the classroom aide, speech-language pathologist, tutor, etc. -- can be helpful in identifying what the script is. The following are sample questions to ask in determining what the actual classroom script is:
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1. When must children be quiet?
2. When can children talk to each other?
3. When can children ask for help?
4. How are the children expected to get and remember their homework assignments?
5. What are children allowed to do when their work is finished?
6. What are children expected to do when they do not understand?
7. What kinds of answers are expected during lessons? specific? elaborated?
8. Who can talk to whom and when?
9. What is the order of events during the day? Does it stay the same each day?
10. How important is it to be exactly correct in reading? writing? oral or signed answers?

(Creaghead, 1992b, p. 28)

Second, we need to determine the cues that the teacher uses to let the children know that the script is to activated. Again, observation in the classroom is needed. The following are some sample guiding questions:

1. What does the teacher do to define the beginning of the lesson?
2. How does she let the children know that they can ask questions or share information?
3. How does she let them know that they have gone too far?
4. How do children know the order of events in the classroom?
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Are they the same each day?

5. How do children know if and when they can interact with each other?

6. Does the teacher typically present directions in writing, orally or in sign or all three?

7. Where does the teacher typically stay in the classroom? Does this change for different activities or in relationship to the importance of the event?

8. How does the teacher mark when free time is over?

9. How do children know what materials they should have ready?

10. How do children know how formal their communication should be?

(Creaghead, 1992b, p. 28-29)

The third step is to determine what the child knows about the script and about the cues for activation. This can be accomplished by observing the child in various contexts within the classroom, by role playing the event or by interviewing the child about what he knows about the script. We might ask the child questions like the following:

1. What things are bad to do in your classroom?

2. What makes teachers mad?

3. How do you know when your teacher is angry?

4. How do you know when it's time to come in from recess?

5. What can you do in the cafeteria that you can't do in class?

6. What does your teacher do when she is going to say something important?
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7. How do you know when it's time to be quiet?
8. What should you do to get ready to take a test?
9. When is it alright to ask a question?
10. What do you have to do to get ready to go home?

(Creaghead, 1992b, p. 29)

Below is a list of steps for helping children develop scripts. The steps move from teaching the basic routine to providing possible variations and then to supporting the child in incorporating the script knowledge in the environment. Steps eight and nine highlight the importance of helping the child distinguish between the old information that is already known and does not require attention and the new information that needs attention in order to follow directions, learn, answer questions, etc.

Strategies for helping children learn scripts

1. Outline the routine with the child
2. Brainstorm variations on the routine.
3. Specify the cues for activating the script.
4. Role play the script.
5. Talk through the script as it occurs.
6. Cue the child within the natural environment.
7. Provide strategies for coping with weaknesses.
8. Distinguish between old and new information.
9. Make a list of new information.
10. Provide directed observation of the script.

(Creaghead, 1992b, p. 29)
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Below is a model for using scripts as a framework for supporting children's language development. The theory is that children have to know the script before they can develop appropriate communication for the context. The script can provide the need for communication and a framework for modeling.

1. **PROVIDE THE ROUTINE**
   - Give the child experience with the routine.
   - Provide redundancy -- do it over and over.

2. **PROVIDE A NEED TO COMMUNICATE WITHIN THE ROUTINE**
   - Create ambiguity to elicit questions.
   - Provide a change in the routine to elicit comments.
   - Create a need or desire to elicit requests.

3. **MODEL COMMUNICATION WHEN THE NEED IS PRESENT**
   - Provide adult models.
   - Provide peer models.
   - Provide direct instruction in what to say.

4. **DEVELOP SOPHISTICATION AND FLEXIBILITY OF COMMUNICATION**
   - When communication is elicited, model expanded utterances.
   - Model additional ways of communicating the same idea.

5. **PROMOTE LEARNED COMMUNICATION SKILLS IN OTHER ROUTINES**
   - Set up similar communication needs in different
Creaghead, Using Scripts to Facilitate Communication routines.
Help the child see similarities between communication needs in different routines.
Model appropriate communication in the new routine.
(Creaghead, 1992b, p. 34)

CONCLUSION

Attention to the scripts for school can help children with hearing impairment be more effective and more confident learners and communicators in that setting. It can further help educators focus on supporting children in developing flexibility in communicating effectively in real contexts, including regular education classrooms.
REFERENCES


