

# SCROL

Grant, R. (1993). Strategic training for using text headings to improve students' processing of content. *Journal of Reading*, 36(6), 482-488

This is a reading comprehension strategy for students in middle and upper grades to help enable them to read and understand a variety of source books. It teaches students to use text headings to aid their comprehension and help them find and remember important information. The SCROL strategy has five steps.

## Stage 1: Develop and Activate Background Knowledge

Prior to teaching the strategy, it is necessary to evaluate the students' background knowledge. Using this in a classroom where the teacher is familiar with the students and their reading ability will provide a lot of this information. Formal or informal assessments can be used to determine what skills the students possess and what skills they lack; doing a task analysis will provide the information for identifying the skills necessary to successfully complete the strategy.

### **Task Analysis for SCROL strategy:**

- Ability to read at the grade level that the book is written
- Knowledge of and ability to identify Headings and Subheadings
- Knowledge of topics, and how they are sometimes presented in texts
- Ability to generalize information and make predictions or inferences
- Ability to identify key words or phrases as they relate to the topic
- Ability to check for understanding
- Ability to turn thoughts into writing
- Ability to recall information that has been read
- Knowledge of outlines
- Ability to proofread
- Ability to compare original text with the outline for accuracy of information

Giving students an informal survey can be an effective way to gather information quickly.

### Sample Survey

Name: _____	Date: _____				
1 = Strongly agree	2 = Agree	3 = Not sure	4 = Disagree	5 = Strongly Disagree	
1. I am able to read and understand my textbooks .	1	2	3	4	5
2. I can pick out Headings and Subheadings in my textbooks.	1	2	3	4	5
3. I can pick out the topic or main idea in the passages of my textbooks.	1	2	3	4	5
4. When I am done reading I can paraphrase information from my textbooks.	1	2	3	4	5
5. I am able to identify key words or phrases as they relate to the topic.	1	2	3	4	5
6. I know if I understand what I have read or not.	1	2	3	4	5
7. I am able to recall information that I have read.	1	2	3	4	5
8. I am able to put my thoughts about text that I read into writing.	1	2	3	4	5
9. I am able to create an outline.	1	2	3	4	5
10. I am able to compare original text material with my outline to make sure it is right.	1	2	3	4	5
11. I am able to proofread my own work.	1	2	3	4	5

Following the survey, teachers' observations, and any other information collecting necessary to establish any deficits, instruction should be given to ensure that students possess the prerequisite skills for the strategy.

### Stage 2: Discuss the Strategy

This stage is the first stage in 'initiating' the strategy. In this stage it is important to be up front and open with the students about what you are doing. It is important to stress the relevance of writing. Brainstorm with the students, situations where reading texts accurately is important. *"When would it be important for you to read a text accurately?"*

- For a test
- For an assignment
- Making an informed decision
- Learning more about something of interest to you
- Assembling something
- Operating equipment

Discuss the purpose of the strategy: *to help them understand and remember information that they read in a variety of source books.* Using their responses

express the necessity to be accurate. Point out the obvious problems that could arise if they were not accurate in reading certain texts.

Discuss students' current performance. Even if students are successful in reading their texts, this strategy will make it easier. By using this they will be able to read their textbooks, take notes and understand it while they read it. It will also help them later, if they have good grasp on it the first time they go through it, when it comes to test time, they won't have to study near as much, and will still know the information better.

Introduce the strategy steps, using a chart to describe the mnemonic SCROL. Students will be encouraged to take notes and express any ideas they have regarding the strategy

### **Survey the headings**

- In the assigned text selection, read each heading and subheading.
- For each heading and subheading, try to answer the following questions:
  - What do I already know about this topic?
  - What information might the writer present?

### **Connect**

- Ask yourself, how do the headings relate to one another?
- Write down the key words from the headings that might provide connections between them.

### **Read the text**

- As you read, look for words and phrases that express important information about the headings.
- Mark the text to point out important ideas and details.
- Stop to make sure that you understand the major ideas and supporting details.
- If you do not understand, reread.

### **Outline**

- Using indentions to reflect structure, outline the major ideas and supporting details in the heading segment.
- Write the heading and then try to outline each heading segment without looking back at the text.

### **Look back**

- Now, look back at the text and check the accuracy of the major ideas and details you wrote.
- Correct any inaccurate information in your outline.
- If you marked the text as you read, use this information to help you verify the accuracy of your outline.

### Stage 3: Model the Strategy

A wall chart will serve as a guide during the modeling process. Cue cards will also be provided so that each student will have their own personal reminder of the strategy steps. The teacher will need to use a “think aloud” to demonstrate the use of the strategy.

#### Sample Script

Okay. What is it I have to do? I need to read this article about “How You Hear?” To be a more effective reader I can use the SCROL strategy. Just to make sure I remember all the steps I will use the wall chart or my cue card to help me.

First is S. That stands for Survey the headings, and subheadings. That is simple enough; I can do that. Let’s see... while I am looking at the headings and subheadings I need to ask myself a couple of questions, What do I already know about this topic? and What information might the writer present? Ok, the first heading is *The outer ear* I just watched a show on discovery about the way our ears work, cool. I bet that is what this is about. I know that there are a couple different parts of the ear. The outer is one of those parts. Ok, the subheading under that is *The Middle Ear*. Yeah, that’s right Outer ear, middle ear. . .what is the other one? I can’t remember, but I do remember that the middle ear has some bones in it; they have funny names. I bet the next heading will tell me what the other part of the ear is. Let’s see, *The Inner Ear*. . . Yep, that’s it. I remember the inner ear helps us with balance. The last heading is . . .*Keeping your balance*, hey looky there I was right. Cool, I already know a lot about this. This will be a piece of cake.

What is the next step? S . . . C. C stands for Connect. I need to ask myself how these headings relate to one another and write down the key words from the headings that might provide connections between them. Alright, well, they are all about the ear. I think I should probably write down the title first since that’s what the whole article is about. . . *How do you Hear?* Then I think probably, *Outer, Middle, Inner, and Balance*, since those are the other major headings, and they all have to do with the ear, and how we hear.

Alright, what is next? SC . . .R. R is for Read the text. This is the part that I used to start with. Okay, as I read I need to remember to look for words and phrases that express important information about the headings. The strategy says to mark the text, usually in my textbook I can’t, but my teacher said I could this time because this is just a photocopy and it’s mine to keep. (Explain how sometimes we need to adjust strategies to fit different situation. If this was a textbook I wouldn’t be able to mark it because the textbooks belong to the school and not me, and other students will need to use them.) Let see, I also need to stop every once in a while to make sure that I understand the major ideas and supporting details. If I don’t understand then I need to reread. 1<sup>st</sup> paragraph – Read – I will mark that ears are organs, I think that is important, and ears collect sound

waves and change them into signals that our brain can understand. I would mark that the ear is made up of three different parts, but I already know that. I already have it written down. 2<sup>nd</sup> paragraph – Read – I will mark ear flap, ear canal, ear drum and membrane. This whole paragraph is important. 3<sup>rd</sup> paragraph – Read – I will mark hollow cave, 3 bones- hammer, anvil, and stirrup. I should also mark that the stirrup makes the oval window vibrate. 4<sup>th</sup> paragraph – Read – I will mark cochlea, vestibule, and semicircular canals. Cochlea – three tubes, filled with fluid. Oval Window vibrates, it makes waves in the fluid. Hairs in the tube prompts nerves to carry messages about sound to your brain. 5<sup>th</sup> paragraph – Read – mark, semicircular canals help you keep your balance. Fluid and hairs let the brain know has happened. Vestibule contains two sacs filled with fluid and sensitive hair cells. Chalky particles inside them, pulled by gravity. Particles press on the hairs at the bottom of each sac. Nerves from the hairs signal your brain about the position of your body. I got a lot of information from the text, but these pictures are great too.

Okay. Where am I now? Step four is O, which stands for Outline. I know how to outline; we went over this. If I need to I can use the wall chart as an example. My Outline needs to include headings, major ideas, and supporting details. When I am writing my headings I should try and outline them with out looking back at the text. If I can remember it now I will have a much better chance at remembering it later. Let see, my first heading is the Title – How do you hear? – I remember that the ear is an organ made up of three different parts, listed below. The ear converts sound vibrations to signals that the brain can understand. *Outer* - The outer ear has an ear flap, ear canal and eardrum that is made up of a sheet of skin. *Middle*- Three bones that hit each other, hammer, anvil and stirrup, and the stirrup vibrates the oval membrane. *Inner*- cochlea looks like a snail and has fluid and tiny hairs that vibrate when the oval window vibrate and that sends signals to the brain, then there is the vestibule and semicircular canals. *Balance*- the semicircular canals are filled with fluid and hairs that move with the movements of the head, and send messages to our brain and help us balance. The Vestibule has two sacs filled with fluid and chalky stuff that is pulled down by gravity, and lets our brain know what position our body is in.

The last step, I am almost finished! L. L stands for Look back. Now I need to check my memory, and look back to see if what I outlined was accurate. If I did write down something wrong, now is the time to change it. Since I marked my text this should be easy. Let's see . . . Wow, I really remembered well. I worded some things differently, but I have the same information. YIPPEE!!!!

Once modeling has been completed, the student will be asked to discuss what they thought. Do they think this will be something useful for them, and why or why not. How well do they think they will use the strategy? What would they have done differently? Do they have any questions about what I did?

In this stage teachers need to closely monitor student progress. Student need to shown their improved performance, if it is not clear to them. This can be done by comparing the quality of notes taken before and after the use of the strategy, or simply by keeping track of academic performance on graded work.

#### Stage 4:Memorize the Strategy

Memorizing the strategy is extremely important! We want the students to focus on the task and not on the steps of the strategy. The activities themselves are not important. The important part is whether or not they facilitate memorization.

##### **Memorization Activities**

- 1) Pair up and recite the stages with a partner, explaining what needs to be done at each stage.
- 2) Students will make their own cue cards with the strategy steps on them. The teacher will make sure that all steps are complete and accurate.
- 3) Memory Circle – Students form a circle around one person. The person in the middle calls out letters in the mnemonic, SCROL, and points to someone who has 5 seconds to accurately state what the letter stands for. If they don't get done within the 5 seconds then they go to the middle.
- 4) Students will be prompted during various times of the day to recite different steps in the SCROL strategy, and will be rewarded to do so.

#### Stage 5: Support the Strategy

In this stage scaffolding is important. With scaffolding it is possible for a gradual transfer of strategy performance from teacher to student. This is possibly the most critical part of the process; students need to be given adequate time and support to master the strategy.

Students will be given short texts to read and use the strategy with. The texts will be relevant to the curriculum being introduced. Students can use the strategy in a relevant situation, which will enable them to see its usefulness.

Students will initially be put into pairs, assigned by the teacher, to work. This will allow them to consult with others while reading and using the strategy. Students will be paired according to their strengths and weaknesses, as well as their ability to work together.

The teacher will support the strategy by working collaboratively with students, in pairs and on an individual basis, making sure they are using the strategy appropriately. By doing this the teacher will be able to give support when necessary and provide corrective feedback, while fading help over time.

The students will set individual goals with the teacher for reaching mastery of the strategy. These goals will help guide them to independent performance. The teacher will need to be aware of the progress that students are making towards their goals. If a student is having difficulty reaching their goal, it may be necessary to reassess the situation. Reteaching the strategy or clarifying uncertainties may be necessary. In other cases, readjusting the goal may be in order for the student to be successful.

Students will be encouraged to use their cue cards and the wall chart to guide them through the strategy steps. As students move closer to mastery, prompts will be removed so that the student does not completely rely on them.

Students need to show mastery of the strategy steps and their use as well as, their own regulation of the strategy. Each student needs to be able to demonstrate the use of the strategy by doing his or her own "think aloud." When the student has successfully demonstrated their use of the strategy they are ready to move on to independent practice. The time that it takes for students to reach this level of mastery will vary.

#### Stage 6: Independent Performance

During this final stage, students will be given a variety of texts along with their content specific textbooks. The student will be required to use the strategy and turn in their notes for teacher review. The teacher role has now changed; the main focus of the teacher will be to monitor students' performance. The teacher will only intervene when students need clarification or their performance is decreasing in quality.

Students may modify the strategy to personalize it; this is fine as long as they are still successful. At this point it is not so much following the steps that matters, it is the fact that the students can be successful at reading the given text, take accurate notes, and recall important information.

As a teacher, it is important to constantly monitor students. It may be necessary or helpful to return to earlier stages and reinforce the strategy. This is normal.