

Real-Time Teaching

Learning How to Learn: Cornell Notes as an Example

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At the beginning of class, Anna (teacher names are pseudonyms) places a transparency on the overhead projector. Her students know to copy the notes she has written into their notebooks. When they have the copied content notes, Anna assigns a reading from the text and reminds her students to answer the questions at the end of the chapter for homework. This type of instruction was common practice for Anna in her 9th- and 10th-grade science classes. She would often assign independent work and manage student behavior by closely monitoring two or three disruptive students throughout the duration of the class. Although success rates were average, she wondered if her students were gaining an understanding of the content and if that knowledge could be mobilized for creative and critical thinking tasks.

Anna's interest in improving the outcomes of her students led her to seek guidance from her colleagues, one of whom was a literacy coach. It was common practice for teachers in the science department in which Anna worked to meet regularly, both formally and informally, to discuss their teaching practices. As a result of the sense of community and support, she felt comfortable sharing her concerns and asking for assistance.

A Focus on Teamwork

Teachers in the science department and Christine, the school's full-time literacy coach, gathered at the beginning of the second semester to brainstorm ways to improve students' understandings of targeted content, which would be reflected by their achievements on related assessments and assignments. The team recognized the need to provide increased opportunities for students to engage more deeply with the content in each of their courses.

Having been recently introduced to the Cornell note-taking method, Christine decided to share it with these teachers. She explained that Marzano, Pickering, and Pollock (2001) had identified summarizing and note-taking as strategies with "a high probability of enhancing student achievement for all students in all subject areas at all grade levels" (p. 7). She demonstrated that when using this method, the student's paper is divided into three sections: keywords/questions, main ideas, and summary (see Figure 1).

Recognizing the Need for Gradually Releasing Responsibility

In Anna's first attempt to introduce the Cornell note-taking method, she distributed a blackline master similar to Figure 1 and directed her students to complete it by recording keywords and main ideas shared during her lecture. She was frequently interrupted, because her students were both confused and concerned about which information to include. Following the lecture, she asked her students to summarize the lecture. These summaries would be their tickets out the door. Anna often asked students to complete similar exit slips as a way to assess their understandings of what she had just taught. Although some of the students' summaries were on target, many were complete rewrites of the information contained in the main ideas column, only written smaller to fit everything in the smaller summary space, and others were very brief and missing the main point.

When Anna approached Christine to share her concerns about what had occurred when implementing the Cornell note-taking method, Christine suggested that they could introduce it using the gradual release of responsibility framework. She offered to model the process for students. According to Nell K. Duke and P. David Pearson, the gradual release of responsibility provides scaffolding and moves from the teacher assuming "all the responsibility for performing a task...to a situation in which the students assume all of the responsibility" (as cited in Fisher & Frey, 2008, p. 2). The releasing phases are modeling, guided instruction, collaboration, and independent practice and are adapted based on student readiness and needs rather than introduced sequentially.

Modeling

Recognizing the need for explicit instruction, Anna and Christine modeled how to take notes using a displayed Cornell template. Copies of the template were prepared in advance on chart paper and posted for all students to see. As Anna read the information to the class, Christine modeled for the students, through a think-aloud, the information she would include in the different sections of the template. During the think-aloud, she shared her thinking process with the students by focusing on how she determined which

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Figure 1 An Example of the Cornell Template That Anna^a and Christine^b Provided to Their Students

Course	Date
Keywords/ Questions	Main Ideas
Summary	

^aAnna is a 9th- and 10th-grade science teacher. ^bChristine is a literacy coach.

information was important (e.g., identifying signal words in the text) and the reasoning behind her decisions to include or exclude certain information (e.g., how she inferred meaning). While demonstrating summarization, she provided insights about the

decisions that helped her determine how to condense the main body into a few succinct sentences.

Guided Instruction

The next day, using another blank copy of the Cornell template on chart paper, Christine and Anna involved the students further by eliciting their responses. This time, focusing on a few passages from the textbook, Christine modeled how she selected keywords and paraphrased main ideas from the first paragraph, again using a think-aloud. Through whole-group instruction, she then asked the students to determine which keywords they would select from the next paragraph and to share reasons for their selections.

Later that week, Anna repeated the process using a short video that contained additional information on the topic. She paused the video periodically to help students determine keywords and main ideas and found that by repeatedly guiding students through this whole-group note-taking method, they were better able to select keywords and extrapolate the main idea. She could tell that the students were gaining competence and confidence.

Figure 2 Keyword Notes

Box 1 1. 2. 3.	Box 2
Box 3	Box 4
Box 5: Summary	

Note. This template was adapted by Dr. Brandon Doubek of the Leadership and Learning Center. The original idea came from *Thinking Strategies for Student Achievement: Improving Learning Across the Curriculum, K-12* (2nd ed.), by D.D. Nessel and J.M. Graham, 2007, Thousand Oaks, CA: Corwin.

Collaboration

After some time was spent guiding instruction, Anna and Christine agreed that the class was ready to take another step toward independence, so they placed students in groups of two, strategically pairing those who were experiencing more success with others who needed additional support. Anna provided each pair with a primary source text and highlighters and asked them to complete the keywords and main ideas sections of the Cornell template.

To provide further assistance with the summary, Anna asked students to take turns covering the main ideas section and using the information recorded in the keywords section to articulate a summary to their partner. Once the information was recorded, she had partners group with another team to share summaries and determine if important information needed to be added or irrelevant details needed to be removed. She felt that allowing students such opportunities to recite and reflect on the content would help in their retention of the material.

As Anna and Christine monitored progress, they noticed that some students were still experiencing difficulty in selecting keywords. Some expressed frustration and wanted to go back to rote note-taking, because they did not want to have to “think” about the material. Christine intervened by introducing keyword notes as an additional scaffold. Keyword notes is a procedure in which the page is divided into four boxes (see Figure 2). Each box corresponds with one paragraph in the text. Students record three keywords per paragraph. After reading each paragraph and recording the keywords, each student confers with a partner, sharing the words they selected and the meanings they constructed from the reading. Through working with their peers, students’ skills and confidence were further developed.

Independent Practice

Once Anna and Christine determined that less support was needed, students were asked to complete Cornell notes on their own. To accommodate student differences, Anna provided some students with templates that already contained the keywords. For other students, she provided a blank template, and for oth-

ers, no template, as some students preferred to create their own.

This time when Anna delivered a short lecture, it went uninterrupted except for a few clarifying questions. Once again, she asked students to complete a summary as a ticket out the door. When she read the summaries, she determined that the students were not only able to ascertain the main idea but most were also able to effectively articulate their understanding in a few sentences using their own words. Throughout the duration of the unit, Anna provided time for her students to review their Cornell notes regularly. She encouraged the students to reflect on the material by asking themselves questions. She was sure that an increase in student achievement would be evident on the unit test. What made her most proud, however, was that she succeeded in teaching students to think independently.

Results

When the science department formally met again, Anna was eager to reflect on her students' success and share her experience with her colleagues. Releasing responsibility gradually to students had provided the support necessary for them to increase their proficiency and build their confidence. Explicitly teaching students how to summarize and take notes enabled them to identify keywords, condense important information into their own words, and solidify meaning. Not only did it result in a smoothly running classroom, but also students learned more.

A number of other teachers in the science department had experienced similar success. On their midterms, students of teachers who had implemented the Cornell note-taking method had higher class average scores than those of teachers who had not. In addition, the class average for the courses in which

Cornell notes were implemented was 10–12% higher than it had been the previous semester. The evidence that was most striking was a comparison of success rates of students in different sections of the same course. In the section taught by Anna, all students passed the midterm, compared with only a 70% success rate in the section taught by another teacher who had not implemented Cornell notes. When presented with this evidence, all of the teachers agreed to place a greater emphasis on summarizing and note-taking.

Christine recognized that teachers would have questions about incorporating Cornell notes, so she led a discussion to identify concerns and challenges that lay ahead. Although some were confident with independently introducing the method into their classes, others requested the support of Christine as the literacy coach. The discussion came to a close after the team brainstormed strategies for overcoming obstacles and agreed to support one another through the process. Christine's schedule filled up quickly!

References

- Fisher, D., & Frey, N. (2008). *Better learning through structured teaching: A framework for the gradual release of responsibility*. Alexandria, VA: Association for Supervision and Curriculum Development.
- Marzano, R.J., Pickering, D.J., & Pollock, J.E. (2001). *Classroom instruction that works: Research-based strategies for increasing student achievement*. Alexandria, VA: Association for Supervision and Curriculum Development.

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