Literacy Across the Curriculum:
Teachers Teaching Teachers about Content Area Reading
Strategies and their Perceptions of the
Effectiveness of these Strategies

by

Barbara Cahoon, M.Ed.
University of Manitoba
May 2008
Abstract

This study employed a mixed method research design to examine a teachers-teaching-teachers method of professional development for training secondary school teachers to use content area reading strategies and their perceptions of the effectiveness of these strategies. Teachers were trained by the researcher (who is also a teacher) to use three content area reading strategies: one before reading strategy (K-W-L), one during reading strategy (Student-Generated Questions), and one after reading strategy (Learning Logs).

The findings revealed that teachers perceived content area reading strategies to be very effective for improving student comprehension. The Duke and Pearson (2002) model of comprehension instruction (and particularly the modeling portion of this framework) was found to be an effective way in which to teach both teachers and students how to use content area reading strategies.

This study provides teachers with information they can use to learn more about content area reading strategies. It also provides information for administrators, reading clinicians, resource teachers, and professional development committees regarding effective methods of teacher training.
Introduction

More and more students at the secondary school level do not have the decoding and/or comprehension skills necessary to read and understand the texts they encounter in secondary school classrooms. Vacca, Vacca, and Begoray (2005) explain that some struggling readers avoid eye contact with the teacher, misbehave in class, forget to bring their books to class, and get help from their peers. It is important to note that school might not be the only place in which struggling readers experience difficulties due to their lack of reading skills. Reading is a life skill, and students must be able to read in order to function in society. Everyday tasks such as driving, grocery shopping, banking, and reading the newspaper require some amount of reading proficiency. One of the ways in which teachers can help students improve their reading skills is through strategy instruction (Duke & Pearson, 2002). “Strategy instruction involves teaching students about strategies, teaching them how and when to use strategies, helping students identify personally effective strategies and encouraging them to make strategic behaviors part of their learning schema” (Beckman, 2002, p. 3). This study investigated the use of a teachers-teaching-teachers method of training to teach five secondary school teachers how to implement three content area reading strategies in their classrooms. In addition, this study examined the teachers’ perceptions of the effectiveness of the strategies in improving comprehension and the effectiveness of the training methods employed in the study.

Theoretical Context of the Study

It is a widespread belief that students at the secondary level are capable readers who are able to decode and comprehend text proficiently. Unfortunately, this is not always the case. There are many secondary school students who do not have sufficient reading skills to allow them to read and understand the texts used in secondary school classrooms. While it is true that
secondary school students struggle with both the decoding and comprehension components of the reading process, this study focused only on the area of comprehension. A large proportion of struggling readers with whom the researcher has worked were able to decode the words in the text but seemed to have little understanding of what they had read.

Struggling readers may not be the only ones who experience reading-related problems in secondary school. A high proportion of reading material at the elementary level is narrative text while a considerable amount of middle and secondary school reading material is based on expository or informational text (Schifini, 2005). Furthermore, students at the middle and secondary schools are required to complete more demanding assignments based on the reading material. They are required, for example, to do research essays, summaries, projects, tests, exams, and oral presentations. Even students who are considered average or good readers might not be prepared to deal with the new material and text structures presented in expository text and the types of the class assignments that accompany them.

Good readers read strategically, and they are very active in the reading process (Pressley, 2000a). They establish a purpose for reading, preview the text, make predictions as they read, ask questions, re-read to clarify ideas, use context clues to figure out vocabulary, relate new ideas to information they already know, make notes to remember key ideas, and discuss ideas they have learned in the reading. Efficient readers also possess megacognitive knowledge about their reading. As they are reading, they monitor their comprehension of the text and also consciously use reading strategies when they read (Pressley, 2002). By teaching their students how to use reading strategies, teachers can help them become active, strategic, metacognitively-aware readers.
Purpose of the Study

The overall goal of this study was to investigate the process by which the researcher could help teachers implement research-based reading strategies in their content area classrooms and to examine their perceptions of these reading strategies. The study looked specifically at the Duke and Pearson (2002) model of comprehension instruction as a framework for training both teachers and students how to use a before reading strategy (K-W-L), a during reading strategy (Student-Generated Questions), and an after reading strategy (Learning Logs). This study also sought to determine the teachers’ prior use of content area reading strategies, as well as the type of professional development they had received in the field of content area reading instruction. An additional purpose of the research was to determine teachers’ perceptions of the effectiveness of the teachers-training-teachers method of instruction used in the study.

Review of the Literature

In an interview with Marcia D’Arcangelo, Donna Ogle (a past president of the International Reading Association) explained that “we’re still struggling to make reading across the curriculum a reality, particularly at the middle and high school levels” (as cited in D’Arcangelo, 2002, p. 3). It is assumed that by the time students are in high school, they know how to read well enough to function in classrooms, and as a result, many secondary schools do not even include reading as part of their curriculum. One of the reasons why it is so difficult to teach reading and writing at the secondary school level is that many secondary school teachers consider themselves to be content experts who focus on the content and not on teaching students how to learn (Ogle, as cited in D’Arcangelo).
Many content area teachers believe that it is the duty of the English language arts teachers to teach reading. In a study conducted with middle and high school teachers, Haydey (2005) found that “some content area teachers dismissed the idea that they somehow must share the responsibility for teaching text processing. That, in their view, was the purview of the language arts teachers” (p. 207). It is, however, important to note that many English language arts teachers at the middle and secondary school levels have not had any training in *how* to teach reading.

Reading is a skill that is used in all subject areas across the curriculum and it should be addressed by all types of teachers. According to Vacca et al. (2005), “All teachers play a critical role in helping students think and learn with text” (p. 3).

*Strategy Instruction*

There is an extensive body of knowledge indicating that teaching students how to use reading strategies can enhance their reading comprehension (Dole, Brown & Trathen, 1996; Duke & Pearson, 2002; Palinscar & Brown, 1984; Paris, Lipson, & Wixson, 1994; Pressley, 2000b; Vacca & Vacca 2002). In order to be considered a strategic reader, a reader’s action “must be elected from an alternative action and it must be intended to attain the specific goal. Thus, the reader who happens to find the main ideas of a paragraph by reading only the topic sentence could be correct and lucky, but not necessarily strategic” (Paris, Lipson, & Wixson, 1994, p. 789).

According to Lipson and Wixson (2003), there is a relatively small number of research-based reading strategies that can used to improve students’ comprehension. Effective readers make connections between the text and their prior knowledge of the content, make inferences to connect information, ask questions throughout the reading process, visualize and create mental
images as they are reading, monitor their understanding of the text, clarify things they do not understand, stop occasionally to summarize what they have read, and evaluate new information they have learned.

**Strategies Relevant to the Current Study**

**K-W-L Strategy**

In 1986, Donna Ogle developed a strategy called K-W-L which is used for activating background knowledge, establishing purpose for reading, and reflecting on what has been learned. The basic K-W-L strategy uses three columns to write down information that we **Know** (background knowledge), **Want to know** (asking questions) and have **Learned** (key points) (Zwiers, 2004). There are also a number of variations of the K-W-L strategy such as K-W-L Plus which uses graphic organizers within a K-W-L chart to help students further organize information into additional categories, or the K-W-H-L-S which adds two extra columns, one for how students will learn the information and one for how they will show what they learned (Zwiers).

**Student-Generated Questions Strategy**

Teachers asking students questions about text material has been a cornerstone of content area classrooms for many years. Zwiers (2004) believes that students are tired of answering questions and thinks that “we need to let the students generate their own questions to drive their learning. This gives students more personal investment into what they will think about and what they will look for as they read” (p. 97). There are a number of studies (Chin & Brown, 2002; Davey & McBride, 1986; Singer & Donlan, 1994) that have shown the significance of student-generated questions in enhancing reading comprehension.
Learning Logs Strategy

Learning Logs give students the opportunity to reflect on what they have learned and to increase their awareness of how they learn and remember. They also give students a place to keep an ongoing record of challenges they are facing during learning. Learning Logs also provide a vehicle for writing about thinking as a way of learning and provide a place for recalling previous learning and summarizing present learning (Manitoba Education and Training, 1998). Learning Logs can be used to help students make connections with the text, reflect on their learning, ask questions about the text, highlight main ideas, celebrate successes and express opinions.

Teachers’ Perceptions of Content Area Reading Strategies

A number of studies (Barry 2002; Bean, 1997; Coley, DePinto, Craig, & Gardner, 1993; Forget, 2004; Haydey, 2005; Maaka & Ward, 2000) were conducted, similar in nature to the present study, which strived to determine the types of strategies content area teachers are using in their classrooms, and with what frequency they are being used. The results of these studies seemed to indicate that teachers found the use of reading strategies to be an effective way in which to help students improve their comprehension of content area text. The studies also showed, however, that reading strategies were not necessarily being implemented by teachers on a consistent basis. It was also evident that teachers had concerns about the amount of time required for both the preparation and implementation of reading strategies. Teachers need training and ongoing support in the field of content area reading strategies, so they can teach their students how to use these reading strategies and offer them ongoing support, as well.
Model of Comprehension Instruction

In the current study, the Duke and Pearson (2002) model of comprehension instruction was used to teach both teachers and students how to use reading strategies. The model of comprehension instruction posited by Duke and Pearson includes the following five components:

1. An explicit description of the strategy and when and how it should be used.
2. Teacher and/or student modeling of the strategy in action.
3. Collaborative use of the strategy in action.
4. Guided practice using the strategy with gradual release of responsibility.
5. Independent use of the strategy. (pp. 208-209)

Throughout these five phases, it is important for teachers and students to realize that there is a need to coordinate comprehension strategies. Reading strategies are not to be used one at a time. Good readers use multiple strategies. While the above model of comprehension instruction shows one strategy being taught, other strategies should be reinforced, modeled, and encouraged throughout the teaching and learning process (Duke & Pearson, 2002).

Professional Development: Teachers Learning From Teachers

In the present study, the researcher (also a teacher) taught teachers how to use reading strategies in their content area classrooms. For countless years, teachers have collaborated in both formal and informal settings to share teaching strategies, classroom management techniques, favourite lesson plans, success stories, and challenges. It is from these teacher-teacher encounters that teachers learn some of their most practical information—information they can use to plan interesting and relevant activities that facilitate student learning.

According to Vacca et al. (2005), teacher collaboration is an important part of professional development, and “the activity of teachers sharing ideas and insights with one
another is a powerful one. The rapport and trust that grow between individuals break down the walls of isolation that can exist when teachers work alone in their individual classrooms” (p. 349).

Methodology

Subjects

The subjects in this study were five voluntary content area teachers from a secondary school (grades 9-12) located in the City of Winnipeg. The teachers taught a variety of subjects including history, English language arts, journalism, social studies, Native studies, and mathematics.

Design of the Study

An exploratory mixed method design was employed for the study. Creswell (2002) explains that in one form of exploratory design, quantitative data is first collected to obtain statistical results, then qualitative data is collected to expand on the initial quantitative research results. This study used a survey (a quantitative measure) to first collect data, and then used response journals and interviews (qualitative measures) to explain the initial quantitative results in more detail. The data collected in the response journals and interviews, however, went far beyond just further explaining the survey. For this reason, more emphasis was put on the qualitative data rather than the quantitative data.

Order of the Study

The study took place over the course of nine weeks. The format of the study is outlined in the following:

Step 1: Content Area Reading Strategy Use Survey


Step 8: Extra week to complete classroom implementation of content area reading strategies

Step 9: Interview

Data Analysis and Summary of Key Findings

The data were analyzed research question by research question. A number of themes emerged from the data. With the exception of research question one, which was analyzed using
themes and the results of the survey teachers completed at the beginning of the study, data analysis was presented based on the themes that emerged from the data.

In the actual study, each research question was addressed individually and the related themes were discussed in the context of the research questions. For the purposes of this paper, a summary of key findings will be presented based on the most significant themes that emerged from the data.

Theme: Content Area Reading Strategies should be Implemented Across the Curriculum

One of the most important findings to emerge from this study was the fact that it seemed to make content area teachers aware of the fact that they can help students become better readers and that it is not only up to English language arts teachers to address the issue of reading. Teachers appeared to feel that using reading strategies across the curriculum would be beneficial in helping students improve their reading skills. The issue of strategy use across the curriculum was raised in the interviews:

Nicole

Barb: Um, do you think that in a school it would be helpful for students and staff to have strategies being implemented in all of the classes? Like to have you do a strategy with your class and then have reading strategies being done in social studies and then have reading strategies being used in science? Across the curriculum.

Nicole: I think it would be beneficial, yeah. Doing those three [content area reading strategies in the study] I noticed the kids retained a lot more, because I tested them more on this last unit we covered. (Interview with Nicole, Lines 202-208)
Tina

Tina: ...I’m beginning to see that reading strategies need to be used across the curriculum, even though a lot of people are not really in that mindset.

Barb: Right.

Tina: A lot of people just think reading and writing is important for English.

(Interview with Tina, Lines 229-233)

By and large, the teachers felt that using content area reading strategies across the curriculum would be helpful for their students.

Theme: Reading Strategies are Effective for Enhancing Comprehension

All five teachers agreed that using content area reading strategies is an effective means of enhancing student comprehension. They felt that students were better able to understand the text if reading strategies were used as part of the learning process. In the interview portion of the study, teachers made several comments stating that the overall use of reading strategies helped students comprehend the text. A number of these teacher comments are outlined below:

Nicole

Barb: Generally, did you perceive these reading strategies to be an effective means of enhancing comprehension?

Nicole: Very effective. In my case, um, I don’t know why the students seemed to have better retention when I quizzed them and asked them questions about it in class.

(Interview with Nicole, Lines 13-17)
Gabby

Barb: All right. Overall, Gabby, um, did you perceive these reading strategies to be an effective means of enhancing comprehension?

Gabby: Oh, yes, yes, especially for the most limited students, yeah. (Interview with Gabby, Lines 118-120)

Tina

Barb: Overall, do you perceive these reading strategies to be an effective means of enhancing comprehension?

Tina: I’d say that, Yes, I overall do believe that these strategies are effective for enhancing comprehension. (Interview with Tina, Lines 26-29)

Throughout the study, teachers reported the success of the content area reading strategies in improving student comprehension.

Theme: Modeling is a Key Factor of Instruction

Another key issue to emerge from this study was that the Duke and Pearson (2002) model of comprehension instruction was an effective framework for teaching both teachers and students how to use content area reading strategies. Teachers found the Duke and Pearson model of comprehension instruction easy to follow. Furthermore, the teachers found Step 2 of the Duke and Pearson model of comprehension instruction (Teacher and/or student modeling of the strategy in action) to be a particularly effective method for both the teacher training and the classroom implementation of content area reading strategies.

It is important to clarify that following the teacher training session and classroom implementation of the first strategy (K-W-L), it became apparent that there was not enough time to progress through all five steps of the Duke and Pearson model of comprehension instruction.
We were only able to progress through Steps 1-3 (i.e., Step 1: An explicit description of the strategy, Step 2: Teacher and/or student modeling of the strategy in action, and Step 3: Collaborative use of the strategy in action) for both the teacher training and the classroom implementation of the content area reading strategies.

**Modeling is a Key Factor of Strategy Instruction: Teacher Training**

Results of the study showed that the teachers found the Duke and Pearson (2002) model of comprehension instruction, and particularly the modeling portion of this framework, to be an effective method for training teachers how to use content area reading strategies. In their response journals, teachers were asked if they would make any changes in the presentation format used (i.e., the Duke and Pearson [2002] model of comprehension instruction) to train the teachers how to use the reading strategies. Due to the fact that we could not complete all five steps of the Duke and Pearson model of comprehension instruction, teachers were asked to comment specifically on the modeling aspect of the training following the training sessions for the second (Student-Generated Questions) and third (Learning Logs) strategies. Responses to this question support the finding that the teachers found the modeling of the strategies to be a valuable method of training teachers how to use content area reading strategies.

Following the teacher training session for the Student-Generated Questions, Tina stated, “No, I would not make any changes to the Duke and Pearson model of comprehension instruction for ‘teaching teachers’ how to use the strategy. It is quite foolproof. Actively participating ‘through the eyes of the student’ made me feel very open to the strategy and further, made me feel much more confident about implementing the strategy, as well” (Response Journal, Student-Generated Questions, Following Training Session).
Fran also commented on the use of the modeling to teach teachers how to use the reading strategies. She stated, “The modeling of the presentation was good. Seeing the activity on the board gave me a good idea of how the actual activity will look. I also think that modeling any activity is excellent, especially for visual learners” (Response Journal, Learning Logs, Following Training Session).

Finally, the teachers established that having the actual content area reading strategies modeled for them step-by-step, working through the strategies themselves, and seeing how they would be able to teach these strategies to their students to be extremely beneficial aspects of the training.

*Modeling is a Key Factor of Strategy Instruction: Classroom Implementation*

All five participants in the study agreed that the Duke and Pearson (2002) model of comprehension instruction was an effective framework to use to teach students about content area reading strategies. A number of the participants also found that the modeling portion of the framework was very valuable for teaching students how to use content area reading strategies.

Jamie and Tina commented on the effectiveness of the Duke and Pearson (2002) model of comprehension instruction as a framework for implementing reading strategies in their classrooms following the classroom implementation of the Student-Generated Questions Strategy. Jamie explained, “I believe that the Duke and Pearson (2002) model of comprehension instruction was effective in delivering this strategy. We used it twice during our study period, so unfortunately we were unable to progress the model fully. During our second session, I led with one question and the students seemed to take over from there” (Response Journal, Student-Generated Questions, After Implementation). Tina stated, “Yes, the Duke and Pearson model of comprehension was effective in terms of implementing the strategy in my classroom. I find the
students are better able to grasp how a strategy is to be used when it is modelled for them by the teacher” (Response Journal, Student-Generated Questions, After Implementation).

It is evident in examining Jamie and Tina’s responses that they found the Duke and Pearson (2002) model of comprehension instruction to be a valuable tool for implementing content area reading strategies in their classrooms. Tina also stressed that the modeling portion of the Duke and Pearson model of comprehension instruction was particularly effective in teaching students how to use content area reading strategies.

To sum up, the majority of the teachers found the Duke and Pearson (2002) model of comprehension instruction to be an effective process through which to teach both teachers and students about content area reading strategies. They also found that modeling the strategies was a valuable tool for both the teacher training sessions and the classroom implementation of the content area reading strategies.

**Theme: Teachers Teaching Teachers is an Effective Form of Content Area Reading Strategy Training**

All five of the teachers involved in the study felt that the teachers-learning-from-teachers method of training employed in the study was an effective way to teach teachers how to use content area reading strategies. In the interviews, teachers were asked about the effectiveness of this training method. Some of their comments are outlined below:

*Nicole*

Barb: And do you think that the, um, teachers-learning-from-teachers method that we used in the study with me being a teacher teaching other teachers, you guys, how to use the strategies, did you find that to be effective?
Nicole: Very. I know I’ve heard of learning logs and that, and journals, stuff like that, but if you don’t know how to present the strategy, how else are you going to know about it? (Interview with Nicole, Lines 162-167)

Tina

Barb: And do you think that the teachers-learning-from-teachers method employed in this study was an effective form of training, with me as a teacher training you how to use the strategies is what I mean by that.

Tina: Definitely. I think, um, especially since we know you, we’re familiar with you… and we know that you have, like you know, a pretty rich background in comprehension strategies, and in reading, and uh, it was a good opportunity, especially for myself. I’ve only taught for six years and it’s good to have that mentorship, and I think because we felt comfortable it’s not like we were sitting in SAG [province-wide teacher conference held annually in Manitoba] with someone we don’t know who’s just going on and on, like we were active participants and willing participants.

(Interview with Tina, Lines 205-217)

It seems that the teachers-teaching-teachers method combined with the modeling of the strategies was a particularly effective method for teaching these teachers how to use content area reading strategies.

Theme: Sufficient Time is Necessary for Strategy Instruction

One of the concerns that teachers brought to the forefront was that of time. At the beginning of the study, teachers were told that it was unlikely they would reach a level where students were able to use the strategies independently within the timeframe of the study, so it is
not that surprising teachers felt they needed more time to work on the strategies with their students. The issue of sufficient time being needed for strategy instruction was discussed by the teachers in both their response journals and their interviews.

Gabby and Jamie both expressed the need for more time regarding the use of the K-W-L strategy in their classrooms. Gabby stated, “I believe that time is a factor for low level readers. With more time and frequent use of this strategy they will improve gradually to become independent readers” (Response Journal, K-W-L, After Implementation). Jamie explained, “We only introduced the strategy since Monday of this week and have employed it twice. I feel that given more time using the KWL chart the students will feel more comfortable” (Response Journal, K-W-L, After Implementation).

In his interview, Jamie expanded on why he would have liked more time to work with each of the strategies:

I mean I would have liked to have had more time with each of the strategies and then I could see, you know, if I was to have to choose a strategy, I could maybe say then, “Okay, this one would be the most effective for the kids”. (Interview with Jamie, Lines 178-181)

Generally speaking, the teachers seemed to feel that if they had been given more time to implement the strategies, the students would have eventually become more confident and comfortable employing the strategies.

Conclusions and Recommendations

As some students continue to struggle with the demands of content area reading placed on them at the secondary school level, it becomes the responsibility of teachers of all subject areas to find ways to assist them. One of the ways in which teachers can help their students
tackle these texts and improve their comprehension is by teaching them how to use content area reading strategies. Content area teachers should be seeking out professional development opportunities that would teach them how to implement content area reading strategies in their classrooms, and if these types of sessions are not being offered, they should make requests to have them offered.

A similar study to the present one, but extended over a longer period of time, would be an interesting direction for further research. Teachers would have the opportunity to progress fully through the five steps of the Duke and Pearson (2002) model of comprehension instruction when implementing the strategies in their classrooms, and the study could gauge the effectiveness of this model of comprehension instruction in its entirety. An additional element could be added to the study that examines the reading comprehension of the students both before and after the implementation of the content area reading strategies. Finally, an extended study might help determine how much time is sufficient for strategy instruction in the classroom.

Reading is not only an integral part of school; it is an integral part of life. Helping students become better readers will not only benefit them greatly in school but also in their lives beyond school.
References


