Classroom organization for instruction in content areas

Pardo is a classroom teacher at Allen Street School in Lansing, Michigan, and Raphael is a member of the literacy faculty at Michigan State University.

Chad, Megan, Anna, David, and Dennis, a heterogeneous group of children in Laura Pardo's urban third grade classroom, have been studying newspapers for approximately 5 weeks as part of a social studies unit on communication. To write their report about newspapers, they've gathered information from their textbook, taken a field trip to the city newspaper, interviewed an expert on newspapers, and read trade and reference books.

Laura organized instruction in three different ways to give the students optimal opportunities to learn new concepts and strategies, and to apply and practice these strategies in a variety of situations. The three forms of classroom instruction allowed students to (1) participate in teacher-led whole class lessons, (2) work in a cooperative small group, and (3) work independently.

By emphasizing the social nature of learning, Laura sought to create a classroom environment to meet the overall goal of content area instruction: to help students become skillful at learning and organizing content area information. Students should be able to meet this goal both when working independently and when working in a group.

In this article we examine three ways to organize classrooms to meet the goals of content area instruction. We begin by examining research on grouping practices that support students in their learning and organizing of content area information. We then follow Anna and her peers as they use selected strategies while participating in different forms of grouping, during the class unit on communication. We use the experiences of these students to illustrate how different grouping arrangements foster particular kinds of learning.

The research base: Grouping practices

Using groups within classrooms has a long history, dating back almost 80 years to when ability was first used as a basis for forming small groups (Barr, 1989). Ability grouping has continued to dominate reading instruction in spite of research suggesting that the instruction received in the lower achieving groups differs substantially from, and is inferior to, that received by higher achieving children (Allington, 1983). Furthermore, research suggests that there is no justification for separating students into ability groups...
(Yates, 1966), and that instruction in heterogeneous groups leads to higher achievement for all students (Dishon & O'Leary, 1984).

Issues of grouping are often ignored in content area instruction, where a single textbook is typically used for students of all reading abilities, and instruction centers on whole class lessons. Yet research indicates that students earn higher grades, develop more skill in critical thinking, and become better decision makers when they study in smaller cooperative learning groups (Johnson & Johnson, 1984; Slavin, 1985). Cooperative learning groups may produce academic benefits, including higher individual achievement, as well as social benefits. Also, learning within collaborative groups more closely parallels activities found in the workplace.

The research indicates that participating in heterogeneous groups can help students acquire and share content area knowledge, especially when the purposes of the groups fit the goals of the lesson or unit, the groups are heterogeneous, and the students have the necessary academic and social strategies to succeed in the group activities. Thus, determining the organization for a particular lesson depends on the purposes of the lesson, the content to be learned, and the strategies needed.

**Organizing for content area instruction**

Studying subject matter in Laura's classroom involved four broad phases. First, students needed to develop a general concept of the topic (in this case, communication). This would give them a shared understanding and vocabulary to use in discourse about the general topic and related subtopics. Second, students gathered information both about general concepts and their specific subtopics, using a variety of information sources and comprehension strategies. Third, students organized and synthesized the information through charts and summaries. Fourth, students drafted and shared their final reports. Students' success in each of these phases was enhanced by their participation in reading and writing activities within appropriate grouping arrangements (see Table 2).

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**Issues of grouping are often ignored in content area instruction.**

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**Selected comprehension strategies**

Merely using a variety of grouping arrangements in classrooms will not automatically create independent and successful learners. Fundamental to students' success is learning a common vocabulary about strategies and learning the strategies themselves. Dennis, Megan, and their peers were able to take responsibility for planning, organizing, and writing their report on newspapers because of their familiarity with specific reading comprehension strategies. As seen in Table 1, these strategies included: K-W-L (Ogle, 1986), journals (Fulwiler, 1982), Author's Chair (Graves & Hansen, 1983), concept maps (Johnson, Pittelman, & Heimlich, 1986; Schwartz, 1988), QARs (Raphael, 1986), and Cognitive Strategy Instruction in Writing (Raphael & Englert, 1990). These strategies were the tools that provided students with the means to acquire and remember the content knowledge in the communication unit and other units.

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**Teacher-led whole class discussions**

There are several purposes for teacher-led whole class discussion, including: (1) introducing new strategies and concepts, (2) sharing related background knowledge, (3) building common experiences and reviewing previously presented ideas, (4) learning from difficult text, and (5) enrichment activities. The communication unit provided ample opportunities for students to participate as a whole class for each of these purposes. Lessons focused on the content to be learned and on processes or strategies that supported content learning (Roehler, Duffy, & Meloth, 1986).

Introducing new strategies and concepts occurred on 3 occasions: when the communication unit began and the concept itself was defined using a concept map, when the stu-
Table 1
Selected comprehension strategies

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>K-W-L</td>
<td>This framework helps students build background knowledge and share common experiences. $K$ stands for what do I already know? $W$ stands for “What do I want to learn?” and $L$ stands for “What have I learned?” It prompts students’ thinking about: (1) their relevant background knowledge, (2) questions that reflect their purposes for reading, and (3) the information they learned from reading the text. Using K-W-L encourages students to attack informational text with a purpose, and recognize the information they have gleaned from it.</td>
</tr>
<tr>
<td>Focus journals</td>
<td>This type of journal encourages students to review their background knowledge, reflect on their previous learning, and predict their future learning. The journal focuses is written on the board by the teacher each day before the students arrive. Students read the focus, reflect on their response and write in their journals. Frequently, the focus of the journal is on content area studies, though some days students choose their own topics. The focus journal helps students focus on their own learning and serves as a basis for discussion.</td>
</tr>
<tr>
<td>Concept maps</td>
<td>These visual organizers help students literally “map” their knowledge base. The maps can be used to help students understand a vocabulary term by having students identify the concept to be defined (e.g., communication); a superordinate category or phrase that helps them understand what it is (e.g., sending and receiving messages); traits (e.g., ideas from one person are shared with someone else; can be done in writing or out loud); and examples (e.g., newspapers, letters, telephone calls). Maps can also be used to organize information from different sources.</td>
</tr>
<tr>
<td>The author’s chair</td>
<td>The author’s chair provides students with a real audience as they share their journals, text, trade books, reports, and so forth. It is a special chair in the front of the room in which a child sits to read aloud to the rest of the class. During the time the child reads, she is speaking for the author. During content area study children may: (1) sit in the author’s chair to read from their textbook to the rest of the class, (2) share their journal reflections and predictions with their peers, and (3) share their rough drafts for help in revisions and final drafts for general comments.</td>
</tr>
<tr>
<td>QAR</td>
<td>QAR teaches children about sources of information, helping students discover and use the many sources of information from which questions can be answered. It provides direction to those students who are overreliant on their background knowledge at the expense of information from texts, or those who are overreliant on the text as sole source of information and do not consider their own background knowledge and experience.</td>
</tr>
<tr>
<td>CSI-W</td>
<td>CSI-W is a framework for guiding students as they plan, organize, write, edit, and revise expository texts. A set of “thinksheets” serves as a basis for the teacher to model strategies. The thinksheets act as prompts for students to take notes and keep records about the information for their reports, to sustain their thinking about topics and as a basis for discussion. Thinksheets may be adapted to serve the specific needs students have as they gather and organize their information.</td>
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</tbody>
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Students used K-W-L to develop new concepts about newspapers, and when students learned to create an organizational chart as they reviewed information they had gathered during the unit. The K-W-L lesson, as students prepared to read the section of the text on newspapers, illustrates how process and content instruction were merged. During the $W$ phase of the lesson, Laura asked students to think about their individual questions about newspapers.

Nina: Why does that black stuff get all over you?
Jenny: Newsprint.
Laura: Newsprint, Jenny said, but why does it get all over us?
Dennis: [interrupting] Ink!
Laura: Yes, why does that ink get on our hands?

Chad’s thinksheet (see Figure 1) illustrates how the children individually wrote questions about newspapers to guide their reading.
<table>
<thead>
<tr>
<th>Group size</th>
<th>Purposes</th>
<th>Strategies used</th>
<th>Examples</th>
</tr>
</thead>
<tbody>
<tr>
<td>Whole class</td>
<td>Introduce new strategies and concepts</td>
<td>K-W-L</td>
<td>Concept map to begin unit</td>
</tr>
<tr>
<td></td>
<td>Review previously presented ideas</td>
<td>QAR</td>
<td>K-W-L on newspapers</td>
</tr>
<tr>
<td></td>
<td>Build common experiences</td>
<td>Author’s Chair</td>
<td>Preparing for and taking field trip</td>
</tr>
<tr>
<td></td>
<td>Share related background knowledge</td>
<td></td>
<td>Modeling organizing information</td>
</tr>
<tr>
<td></td>
<td>Learn from difficult text</td>
<td></td>
<td>Reading and sharing textbook information (e.g., partner read; oral reading to group)</td>
</tr>
<tr>
<td></td>
<td>Enrichment activities</td>
<td></td>
<td>Journal share</td>
</tr>
<tr>
<td>Small group</td>
<td>Apply and practice newly learned strategies and concepts with new texts</td>
<td>CSIW and adaptations</td>
<td>Generating questions/setting purpose</td>
</tr>
<tr>
<td></td>
<td>Work collaboratively to create text (e.g., generate questions, gather</td>
<td>Concept maps</td>
<td>Gathering information from trade books</td>
</tr>
<tr>
<td></td>
<td>information, organize and write drafts, revise)</td>
<td></td>
<td>Preparing interview questions</td>
</tr>
<tr>
<td></td>
<td>Encourage discourse about ideas in text</td>
<td></td>
<td>Conducting interview of expert</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Organizing field trip information</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Drafting reports</td>
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<td></td>
<td></td>
<td></td>
<td>Peer conferences on reports</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Sharing among groups</td>
</tr>
<tr>
<td>Individual</td>
<td>Reflect on ideas, text, and interactions</td>
<td>Repeated readings</td>
<td>Journal focus</td>
</tr>
<tr>
<td></td>
<td>Set individual goals/purposes</td>
<td>Journals</td>
<td>Generating questions</td>
</tr>
<tr>
<td></td>
<td>Apply and practice strategies, concepts</td>
<td></td>
<td>Teacher/student conferences</td>
</tr>
<tr>
<td></td>
<td>Evaluate students’ progress</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Because many students were not able to read the text comfortably, they read the section on newspapers with a partner. They completed the last column of their thinksheets individually, then participated in a teacher-led whole class discussion of the new concepts they had earned. The following segment illustrates how students made connections among earlier discussions, the questions on their thinksheets, and what they had learned from reading.

Laura: Jenny, do you want to share with the class what you and I were just talking about, about what you learned?
Jenny: [reading from text] “Print means words in ink stamped on paper.”
Laura: What does that tell you about one of your questions?
Jenny: It means that the newsprint comes off because it’s stamped.
Laura: What question did you find the answer to?
Mike: The one about why does that black stuff come off on your fingers.

The connections that students made among the discussions, questions, and textbook were reflected in their reports. In a paragraph of their report, the students in the newspaper group discussed the importance of newspapers. This section was directly related to Dennis’s and Chad’s question, “What’s so important about newspapers?” on their K-W-L thinksheets. They had also raised this question in class and on their field trip.

Sharing related background knowledge occurred in different ways. The students’ journal entries served as a basis for a teacher-led whole group lesson in which students shared their knowledge about communication. This provided an introduction to students’ initial reading of the textbook section in which communication was introduced. Students also shared background knowledge during the unit’s culminating activity, in which each group presented its report to the whole class.
<table>
<thead>
<tr>
<th>What do I Know?</th>
<th>What do I Want to know</th>
<th>What did I Learn?</th>
</tr>
</thead>
<tbody>
<tr>
<td>I know that newspapers are printed in black and white</td>
<td>What kind of papers do they use?</td>
<td>I learned that over 60 million people read newspaper a year.</td>
</tr>
<tr>
<td>Newspapers tell you what is going around your state or world</td>
<td>Who invented Newspapers?</td>
<td>Some Newspapers are printed everyday some are printed on weekends</td>
</tr>
<tr>
<td>On Sundays they have comics</td>
<td>What's so important about Newspaper?</td>
<td>there are about 1,800 daily papers in the U.S.</td>
</tr>
<tr>
<td></td>
<td>Why do you get Newsprint on your fingers?</td>
<td>Many Large Community's have more than one daily paper</td>
</tr>
<tr>
<td></td>
<td>What kind of ink do you use? Is it special</td>
<td>Newspaper is stamped instead of printed.</td>
</tr>
</tbody>
</table>
What had been new concepts for each group gradually became their background knowledge, knowledge they were able to share with their peers and eventually the whole class.

**Building common experiences** through teacher-led whole class discussions occurred throughout the communication unit. One way was through all students participating in field trips to such places as a newspaper office and television and radio stations. Each trip was framed by discussions about what they might see and learn, questions they might ask, and discussion about how information learned on each of the trips was related (e.g., people had a variety of jobs at the post office and at the newspaper).

*Learning from difficult text* can be frustrating for students with reading difficulties. It was important for these students to receive support and guidance during the teacher-led whole group discussions. Laura combined two purposes, helping students learn from difficult text and modeling strategies (e.g., note-taking and summarizing). For example, in one lesson, three students took turns reading aloud to the class from their social studies textbook. The students had rehearsed the one or two paragraphs they had been assigned, until they could read aloud fluently.

After each student finished reading his or her section to the class, Laura provided instruction. She thought aloud, stating that one way she remembers ideas later on is by writing down notes that will help jog her memory. She modeled stopping after each set of paragraphs to think about the main topics and the most important idea. She elicited ideas from students, provided her own thinking as a model, and modeled note-taking using a concept map.

*Enrichment activities* during the communication unit involved students listening to a modern form of communication: rapping. Two students from a local high school were invited to perform for the third graders. In an earlier unit, the enrichment activity involved students creating a videotape for their California penpals. The video was based on reports about their community.

**Cooperative small groups**

Cooperative small groups provide opportunities for students to: (1) practice newly learned strategies and apply newly learned concepts to further study in their chosen area, (2) work collaboratively to create texts, whether the texts be full reports, questions, or information synthesized from such sources as interviews of experts in a particular field, and (3) engage in discourse about the content and processes they are learning. Cooperative groups in the communication unit were formed to study subtopics such as newspapers, television and radio, and computers.

*Application and practice of newly learned strategies.* Students had worked with question generation and question answering as part of large group lessons with QARs, K-W-L, and concept mapping. They had also been asked to generate and respond to questions in their individual journals. The use of questions to guide learning was further emphasized in several small group activities.

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**Cooperative small groups provide opportunities for students to practice newly learned strategies.**

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To underscore that field trips were serious opportunities to learn more information, Laura had the students meet in their small groups to identify the questions that they planned to pursue during the field trip. Megan’s question “Where do the colors come from?” helped focus students’ attention on the printing press. Chad’s question “How do you make a newspaper?” led them to notice the steps followed to create the daily paper. Their interest was reflected in a paragraph in their final report (note that all student writing samples are included without corrections for spelling, punctuation, etc.): “This is how newspapers are made. First the reporter finds a story then he/she writes the story. Next an illustrator draws a picture for the story. Another person takes the drawing and draws it on a computer. Then the story is typed and edited. Last it is waxed and put on the page. Finally the newspaper is printed.”
**Organizing thinksheet**

**Question:** What kind of things do you have a newspaper?

<table>
<thead>
<tr>
<th>Art</th>
<th>Traveling</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sports</td>
<td>Local</td>
</tr>
<tr>
<td>T.V.</td>
<td>Adds</td>
</tr>
<tr>
<td>Business</td>
<td>Comics</td>
</tr>
</tbody>
</table>

**Question:** What's so important about newspapers?

So you'll know what's going on all around you.

**Question:** How is your newspaper made?

It is written then edited, and printed and waxed, then it is made.
Working collaboratively to create text. In addition to the drafts of their reports, students created many other texts. These included interview questions and summaries of information gathered during the interview. One of the sources of information available to students in each group was an expert from the community (e.g., a supervisor from the local post office, a computer software engineer). Megan and the other students in the newspaper group identified what they already knew, what they wanted to learn, and the questions they wished to ask their expert. They then met with Sarah, whose family operates a city newspaper, and asked their questions. The answers were recorded on a second thinksheet (see Figure 2), which provided students with the opportunity to practice the strategy of summarizing, in addition to working collaboratively to generate the text.

Another opportunity to work collaboratively to generate text occurred in the writing of the drafts for their final reports. To create the first draft, each student volunteered to draft a paragraph on one of the areas they had collectively decided to include: names of newspapers, jobs in the newspaper office, sections contained in newspapers, how newspapers are made, and why they are important. Students then shared their paragraphs and discussed issues such as (1) the order of the paragraphs, (2) the accuracy of each other’s information, and (3) the content of the introduction and conclusion.

Sections of their report reflected these discussions. Their sensitivity to different sources of information was seen in the introduction: “This report is about newspapers. We talked about them, we read books about them, and we visited the Lansing State Journal.” Their individual questions, such as Chad’s and Dennis’s questions about the importance of newspapers, were reflected in their second paragraph: “This is what’s so important about newspapers. You can see what’s going on around the world. We read newspapers to see if there’s danger and to see what the weather is. Adults read newspapers because they think it is very very important. And that’s what so important.”

The group’s consensus about important categories of information (e.g., on the field trip and during the interview, asking how newspapers are made and focusing again on their importance) was seen in their inclusion of paragraphs containing such information. They agreed that an ending should reflect their goal that “we hope you learned from our report about newspapers.”

Encourage discourse about ideas in or related to text. The many examples listed above illustrate the value of small groups. Small groups provided unique opportunities for students to engage in discourse about their topics and to use strategies for conveying their information. These opportunities helped students value each other as members of the community of scholars with knowledge of social studies topics. Students helped each other use strategies, such as question generation and summarizing, and learned about content by means similar to those of mature learners in the workplace and nonschool sites.

Individual

As Table 2 suggests, the reasons for students to work individually include the opportunities to (1) reflect on their ideas, the texts they are reading, and their interactions with the teacher and peers, (2) to set individual goals and purposes, (3) to apply and practice strategies learned, and (4) to provide information regarding individual progress.

Reflection on ideas, text, interactions. At the beginning of the communication unit, students were asked to reflect on what they already knew about communication by writing in the dialogue journals. Two focus questions guided their thinking and writing: What do you think of when you hear the word communication? What are some ways that you communicate? Different levels of knowledge were apparent, as seen in Chad’s and Anna’s journal entries.

Chad wrote a single paragraph in which he identified “talking, calling, and sign language” as ways people communicate. He then wrote: “I can communicate by calling or talking on the phone.”

Anna used two text structures to convey her ideas. First she listed six ways people communicate: phone, talking, newspapers, letter writing, computer, and movies. Beneath that she wrote four paragraphs, each consisting of a single sentence identifying ways she communicates and expanding on ideas in her list: “I communicate by letter writing, phone & Talking that was I communicate. Like if I
was calling my uncle I would be communicating by phone. Or if I was writing a letter to my grandma. or if I was talking to my friend that's communing."

Setting individual goals and purposes. A second reason for working individually is to set goals or purposes for one's reading. In the communication unit Laura used K-W-L as such an opportunity. The students individually completed the first column, identifying what they knew, and then participated in a whole class discussion where they could learn from each other. Then Laura asked them each to consider what they would like to learn about newspapers. Figure 1 shows the five questions Chad identified to direct his reading.

Apply and practice learned strategies. Laura had taught students question generation as a strategy for identifying both what they already knew and what they wished to learn. The K-W-L lesson allowed Chad to set his own goals, and it also provided him and his peers with the opportunity to practice generating questions which might be answered through reading the textbook. Students also received practice in generating questions prior to using the trade and reference books.

Individual assessment. Assessment should occur within the context of instruction (Au, Scheu, Kawakami, & Herman, 1990). Thus, individual writing and reading activities provided natural opportunities to judge students' success in a variety of ways. For example, Chad wrote a journal entry about communication, a list of questions on the K-W-L thinksheet, and a related list of what he had learned.

All of these gave Laura information about his growing ability to identify important information, to generate relevant questions about the topic to be studied, to comprehend content area text, and to write to express ideas. Laura could also see the content Chad had learned from the text, and she could assess his knowledge of conventions of print and his penmanship.

Concluding remarks

In this article we explored the use of various grouping arrangements in content area instruction. Anna and her peers experienced several rewards from the practices we described. First, over time they succeeded in working cooperatively with their peers on learning tasks, something that is often difficult even for adults. Second, they became risk takers. They were not afraid to try new forms of writing or different ways of conducting conversations to meet their goals, since they believed in their own abilities. Third, they made noticeable improvements in their writing habits. They enjoyed writing and many chose to write in their free time. Not surprisingly, their writing skills improved. We saw these students progress from writing one or two word responses to sustained thinking and writing about content area topics.

Whether or not we should group children for instruction has been debated historically and continues to be debated today. The debate focuses on a wide range of issues, such as equity across groups, the validity of ability grouping, and the value of cooperative learning. This debate is no more critical than in the content areas, where often a single textbook is mandated for use within a classroom and where whole class instruction provides a helpful contrast to the ability groups often used in the reading program.

Yet we should be cautious about maintaining only whole class instruction in the content areas, just as we are now cautious about only using ability grouping in the reading program. Perhaps we have been asking the wrong question about grouping practices. We suggest that the question is not "Should we have groups?" but instead "What groups should we have for what purposes?"

References


