This paper describes a project implemented in one first grade classroom to incorporate learning strategies in the process of group development of curriculum planning and development of instructional activities. The teacher used dialogue, coaching, modeling, questioning, and reinforcement with the students to make prominent the language and thinking skills used in the curriculum development process. Three interrelated steps are described: (1) selecting the target theme (the focus for developing the curriculum); (2) establishing guiding questions to serve as the scope and sequence; and (3) designing the classroom instructional activities.
Incorporating General Strategic Learning Strategies into the Classroom Dialogue: Lessons From a First-Grade Classroom

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Despite research demonstrating the effectiveness of learning strategies, teachers have not incorporated them into their instructional practices. We believed that getting teachers to incorporate learning strategies into educational practice would require an instructional framework in which how one goes about learning different matters would be central in the classroom dialogue. It was this perspective that lead to the development of the Learning Centered Curriculum-Making Project described here. In short, we believed a framework for incorporating strategic learning strategies could be derived from an instructional framework that promotes the use of learning strategies through the development of instructional activities. It is important to note that though learning strategies specific to content areas were used throughout the project, we only present the general framework here.

We chose to use the curriculum-making process as the center of the project because we believed that a classroom dialogue about this process would make it more likely that the classroom instructional practices would reflect a cohesive, purposeful, and lasting quality onto the learning experiences. We used an interdisciplinary or integrated curriculum design approach because it provided an opportunity for more relevant, less fragmented, and stimulating educational experiences. This approach served to bring together the different discipline perspectives and focus them on the investigation of a target theme. While teachers often engage in the interdisciplinary curriculum-making process, we conceptualized this process as a regular and core component of the classroom dialogue.

In this dialogue, Lin, the classroom teacher, made prominent the language and thinking skills related to talking and learning about each of the disciplines. Through dialogue, coaching, modeling, questioning, and reinforcing, she engaged students in speaking the language of curriculum designers or theorists. This dialogue centered around three interrelated steps: a) selecting the target theme (the focus for developing the curriculum); b) establishing guiding questions to serve as the scope and sequence; and c) designing the classroom instructional activities. Because of the interactive nature of
the process, each of the steps is fully described including scripts to illustrate the process. The curriculum-making process primarily occurred over a two week period. To ensure the smooth transition from one unit of study to another, the design of one unit overlapped with the unit that was under study. The first step in the process was to select the target theme.

**Step One: Selecting the Target Theme**

The first step in selecting the target theme was for Lin to identify several potential themes (typically three to four). It is important to note that although target themes can include a problem, event, issue, and subject area, themes should fall within the scope of a definitive area of study. Further, concepts such as patterns, flight, and observations as well as traditional subject areas have proven to be highly effective as target themes.

After the potential themes were identified, Lin introduced them to the class by making copies of books and other material available so that the students could browse through them the week prior to starting the curriculum-making process. Lin and the students explored the books and materials and discussed each of the target themes throughout the week. This included discussing the things that they knew about the themes and how they related to previous matters they had studied or were going to study as well as reading passages out of a number of the books. In this process, Lin and the students discussed some of the reasons (detailed above) for selecting target themes. This discussion typically centered on how the themes were related to previous classroom work and how they would be useful for future work. Although Lin initially modeled for the students the cognitive actions and self-talk underlying the selection of target themes, this soon gave way to a collaborative and social dialogue in which Lin prompted the students to think about the reasons for selecting areas of study.

These discussions typically took place at "circle time" and lasted for approximately 20 minutes. Additional informal discussions and independent exploration of the books and materials occurred throughout the week. Although these discussions often were wide-ranging, by the end of the week, it was clear which one of the target themes Lin and the students were going to study.
Although the primary goal of this step was to select the target theme, these discussions also served a number of other important functions. First, they provided Lin a forum for judging the interest level of the group and the particular interests of individual students and helped her to better understand the varying levels of background knowledge that the group had about the target themes. Second, they helped students to connect previous learning associated with the target theme. Third, because within any general topic there are numerous specific areas that can be focused on, they helped Lin and the students to begin to focus on the information that they considered important. Finally, they helped Lin and the students to focus and formulate important questions they had in regard to the target theme and helped to set the stage for the second step.

Step Two: Establishing the Guiding Questions to Serve as a Scope and Sequence

In the second step Lin determined the full scope and sequence of study that was required across the disciplines for a definitive area of study prior to dialoguing this process with the students. This allowed her to guide the discussion so that the unit was fully developed and well organized.

Lin and the students used a six point graphic display (interdisciplinary curriculum wheel) in which the target theme is the hub of the wheel and the standard disciplines are the spokes. This display encouraged the deliberate exploration of the theme from all discipline fields. Because many of the students were oriented towards certain disciplines, using the interdisciplinary curriculum wheel helped to provoke interest in areas that they might otherwise have ignored. Using the wheel also highlighted areas that were not being covered by the brainstorming session. It is important to note that because topics can favor one or two disciplines more than others, the aim here is not to have an equal number of questions per discipline but to promote students examination and understanding of the target theme through all of the discipline perspectives.

Before brainstorming "questions" or "the things they wanted to learn about the target theme," Lin dialogued with the students about the distinct characteristics of each of the disciplines and how each of the disciplines allowed them to view the matter under study from a distinct perspective. Lin then asked the students to spend some time (approximately 2 minutes) brainstorming on their own to
more fully engage the students in the group brainstorming session. This provided the students with an opportunity to think about important questions they had regarding the target theme.

During the group session, Lin and the students brainstormed the "questions" or "things that they wanted to learn about the target theme." This included engaging in a collaborative dialogue regarding the decision making process that was used to choose the discipline area under which the question might fall. In addition to actively participating in this discussion, Lin recorded the different questions that the group generated under each of the discipline areas. "Free-wheeling" was encouraged to promote spontaneous and unusual responses. To help ensure that the questions generated would cover the full range of the thinking process from recall to synthesis, Lin also posed questions such as "I wonder why they live in some places and not in others (following a question about where whales live)?" when necessary.

Because this free-wheeling brainstorming session often resulted in a potpourri of questions, a follow-up session was conducted to establish the guiding questions (described below) that would serve as a scope and sequence for the target unit, avoiding the risk of delving haphazardly into the target theme. The primary goals of this process were to provide the students with an outline of the scope and sequence of the interdisciplinary unit, provide a structure for the unit of study, ensure the cultivation of higher-level thought processes (i.e., recall, analysis, comparison, inference, evaluation), and provide the framework for developing the instructional activities.

Like the brainstorming session described above, Lin and the students jointly engaged in a dialogue as they mutually established the guiding questions. The "interdisciplinary curriculum wheel" from the brainstorming session was used during this session. This involved the categorization of the questions into definitive superordinate guiding questions which served as the scope and sequence. Lin used colored markers to highlight the questions that were related to one another as the class categorized the questions into guiding questions. Lin and the students first considered the important fundamental questions (i.e., knowledge) and then moved to more complex ones (i.e., analysis, comparison, inference, and evaluation). This included a discussion of the
distinctive characteristics of the different types of questions (e.g., analysis questions focus on identifying the essential parts of something and explaining how they related to the whole).

The brainstorming and follow-up sessions typically lasted 30 to 40 minutes depending on the scope and sequence of the target theme. Additional follow-up sessions were conducted as students began to study a given theme unit to both review the guiding questions and to consider other potential guiding questions to extend and refine what was being learned. For example, because students had learned that whaling was a very controversial issue, the question "What is the future for whales?" was developed in a follow-up session. These follow-up sessions also provided the class with opportunities to reflect on the things they had learned throughout the course of their studies.

The overall goal of this step was to establish the guiding questions to serve as the scope and sequence for the theme unit. This is a critical step because these questions provided the framework with which to design the instructional activities for exploring the theme unit. The design of these activities (described below) is the "nuts" and "bolts" of the Learning Centered Curriculum-Making Project; it is the process in which the class developed the classroom instructional activities they used to examine the unit of study. In addition to this overall goal, these sessions made students aware that studying a given subject matter does not center around a potpourri of questions. Rather, studying a given area requires sustained exploration. Further, these sessions made students aware that there are differing levels of understanding or knowing a given area of study.

Step Three: Designing the Instructional Activities

Once the guiding questions were developed, Lin and the students jointly developed the classroom instructional activities they would use for studying the theme unit. This collaborative dialogue centered on those instructional activities that they would use throughout their studies. Two sessions were used to design these activities. As with all of the previous steps, Lin initially modeled the cognitive processes and strategies which quickly gave way to a mutual social dialogue in which the students assumed responsibility for performing the process and strategies with the design of the instructional activities.
In the first session, Lin and the students focused on the types of information sources they could use to study the theme unit. Lin and the students brainstormed all of the potential sources of information. Lin first asked the students to spend some time (approximately 2 minutes) brainstorming on their own to more fully engage them in the group session. "Free-wheeling" was encouraged in the group session to elicit a large quantity of spontaneous responses. She recorded the suggested information sources on a large piece of butcher block paper that was displayed next to the interdisciplinary curriculum design chart. Lin and the students then explored the most appropriate (i.e., alignment between type of resource and the matter under study) sources of information for each of the guiding questions including the distinct characteristics of the sources of information (e.g., books with maps to find out where whales live) needed to explore each of the guiding questions. This session helped the class to not only better understand the types of resources they could use to explore a given topic but also the need for an alignment between the type of resource and the specific matter under study.

Lin and the students developed the instructional activities or "How were they going to study..." in the second session. "Freewheeling" was again encouraged to promote a wide variety of instructional activities. In addition to actively participating in the discussion, Lin recorded the suggestions under each of the guiding questions which were displayed on an activity design sheet. After they had exhausted all of the potential instructional activities, Lin and the students then talked about which of them, including their characteristics (e.g., amount of time, materials required, and task demands), were most appropriate for each area of study.

Lin used think-aloud statements to prompt students to fully think through their suggestions when the students identified appropriate or inappropriate instructional activities. For example, when a student suggested that the group could do experiments to learn the names of whales, Lin said, "Let's think about that. Let's think about some experiments that would help us to learn the names of whales." After some discussion the group concluded that conducting experiments would not be a good way to learn the names of whales. She then guided them toward some more appropriate strategies for learning the names of whales.
Discussions about the instructional activities naturally led into a dialogue about students' personal learning characteristics. This dialogue served to make students aware of their own learning styles such as environmental, structure, modality, and cognitive preferences and to help them develop additional ones. They also served to make students aware that different people have different learning strengths and ways of learning. To facilitate this dialogue, Lin used think-aloud statements such as "I learn... by.... and I learn things like this by...." She also used questions like "How do you learn...?" and "Are there some other ways that you might use to learn....?" to prompt students to think about their own learning preferences and strengths. These statements were also used to ensure that the activities covered a number of modalities and covered the full gamut of instructional possibilities and grouping patterns (e.g., group projects, learning centers, discussion, research).

These discussions resulted in a number of instructional activities for each of the guiding questions. Further, because the guiding questions were developed to ensure the cultivation of higher-level thought processes, these instructional activities reflected varying levels of thought processes (knowledge, analysis, inference, etc.).

The guiding questions along with the associated instructional activities provided the basis for evaluating the curriculum. The extent to which the students successfully completed the activities provided the basis for evaluating the effectiveness of the curriculum. Because of the nature of the instructional activities, these were performance based assessments. For example, Lin assessed the extent to which students could recall substantive facts about whales by evaluating the comprehensiveness of the students' "whale facts books."
We are continuing to refine our Learning Centered Curriculum-Making project. Some issues are practical in nature, for example, storage areas and procedures for organizing the resources for the unit of study. Others are more fundamental, like how will the process change across the grade levels. Initial explorations conducted in a fifth grade classroom suggest that some of the steps described above can be collapsed into one session. For example, although we found it necessary to discuss the sources of information separately from the instructional activities in the first grade, this was not the case in the fifth grade class. These older students were capable of dealing with these processes together. In addition, implementing the project at the high school level would be problematic given the typical organization and structure of high schools. This is disappointing because we suspect that the process would be especially dynamic at the high school level. Of course, a teacher could implement it within a given discipline area.

We also are contemplating how to deal with the issue of moving away from basal readers and texts as the primary source of information toward a broader array of resources including emerging technology. Although school board members, parents, and teachers agree philosophically with utilizing a broader array of information resources, they are finding the philosophy easier to agree with than to put into practice. This issue is further complicated because not all teachers are comfortable with dropping the old habit of relying on the publishing companies to provide the scope and sequence for each of the disciplines. Related to this issue, because school district regulations require that all materials be assessed in regards to their appropriateness for classroom use, we are working on more efficient procedures with which to screen the materials that children bring to the classroom.

We are currently working on extending this project to include the assessment process. Preliminary attempts suggest that a collaborative classroom dialogue helps to create performance assessments symmetric with the classroom instructional activities. We found that students have much to offer in the design of more relevant and functional assessment procedures. We also found
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that collaborating on the design of these procedures alleviated some of the time pressures associated with their development and scoring.

Although interest in the project has spread widely among teachers at the school, some of the teachers are finding it difficult to think of students as curriculum designers or theorists. Thinking of students as dependents is a difficult perspective to replace with the view of students as collaborators. Although few teachers would argue that students should fully understand the process of learning including the nature and point of education, they find it difficult to balance the inclusion of students into the curriculum making process with their need to direct the learning process. This is an especially important issue because teachers need to capitalize on students understanding of the nature and point of educational activities. Finally, we believe that dialoguing the curriculum-making process along with the learning and thinking strategies associated with specific learning tasks is necessary to initiate students into the language, processes, constraints, repertoire of examples, action and thoughts of a skilled problem solver.
Bibliography


