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## **Toward a Theory of Thematic Curricula: Constructing New Learning Environments for Teachers & Learners**

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### **ABSTRACT:**

A theory of thematic curriculum emerged during the development of a unit on pets, entitled *Pets & Me*. The unit was designed through a school/university partnership for children pre-school to grade 5. Analysis of data collected during the unit's development and field tests supports a dynamic view of curriculum that challenges policy makers to rethink policies that begin from a view of curriculum as a static list of "facts" to be learned or "topics" to be mastered. Reflection on the project led to the differentiation of three distinct constructs: (1) facts and information, (2) topics, and (3) themes. Each of these three constructs plays a different role in children's learning. Facts focus on basic information and narrowly defined ideas understood as discrete items. Topics provide a context for facts and information, and present a way of organizing discrete bits of information into classes of experience recognizable by scholars within traditional disciplines. Themes defined as broad existential questions, transcend disciplines, allowing learners to integrate the information and the topic within the full range of human experience. All three are important elements of thematic curriculum.

### **PREFACE**

Politicians and educators who set curriculum policy, whether at the national, state, or local level, face many questions. These include questions about:

- content of the curriculum (What is "covered"?);
- appropriate materials (Whether to require use of adopted textbooks or to encourage teacher and child selected materials?); and
- locus of control of the content (Should teachers address only "tested" information or should they direct learning while creating an environment where student questions play a central role?).

While these questions can be answered in a variety of ways, it seems that currently, Americans are choosing to think about standardization and a static view of what should be taught and learned in schools. Much of the on-going work regarding national standards reaches a very specific level. Benchmarks for Science Literacy (1993) lists specific concepts to be mastered at specific grade levels. In California, state decision makers recently debated how many pages or how many illustrations in the approved textbook should be devoted to a given topic. And at the local level, there have been increasing numbers of challenges on religious or moral grounds to books being read. Each of these cases reflects a view of curriculum and teaching as part of a static system of delivery. As a question of how to develop curriculum policy, each case, we would argue, represents a misunderstanding of the interactive realities of learning in schools.

In contrast, what follows, presents the story of a curriculum development project that operated from a dynamic perspective, grounded in the traditions of Progressive Education. (Note 1) The process of writing a thematic unit as a collaboration among university-based educators and pre-school and elementary teachers led to a new perspective on levels of knowledge (themes, topics, and facts and information) and their roles in the learning process. The project highlighted the on-going, dynamic, messy nature of curriculum development. This work also demonstrated that it was possible for one group of teachers to write a thematic unit that was useful to others. This paper and analysis provides those interested in curriculum policy decisions with a framework for thinking about thematic teaching and an example of one type of curriculum that engages teachers and children together as learners. As such, this paper makes an argument for curriculum policy that encourages a dynamic vision of curriculum including the exploration of broad existential questions.

## INTRODUCTION

...the language of education, if it is to be an invitation to reflection and culture creating, can not be the so called uncontaminated language of fact and "objectivity." It must express stance and must invite counter-stance and in the process leave place for reflection, for metacognition. It is this that permits one to reach higher ground, this process of objectifying in language or image what one has thought and then turning around on it and reconsidering it. (Bruner, 1986, p.129)

Bruner's observation clarifies the distinction between education and other forms of learning such as indoctrination, training, or conditioning and invites teachers to engage students in learning in ways that are deeply intellectual and connected with moral purpose. While many educators support this ideal, the profession is not clear about how to go beyond standard or traditional practice and create learning environments and activities that truly engage students in meaningful exploration. Many innovative teachers are trying thematic units as one approach to Bruner's "higher ground." We share this interest in thematic units and have worked with teachers to write and field test one unit. During this process, we learned that the theory base for thematic units is not entirely clear, that there are several unresolved questions about what makes a unit thematic, and that we need to know more about what types of teacher involvement in planning are necessary for a successful unit. In this paper, we share the story of the *Pets & Me* project in

order to raise some of these questions, address them from our experience, and introduce a conceptual framework for thinking about the content of thematic units.

Currently, many researchers and teachers in language arts and other disciplines are exploring what they mean by the term thematic unit. In part this feels like a revisiting of some of the central issues of Progressive Education. Dewey, in the early part of the century, argued that the teacher needs to build the classroom around the principles of continuity and integration (Dewey, 1938). Later, Bruner (1960) argued for the centrality of meaning and building a spiral curriculum where students visited and revisited core ideas. Even when the "back to basics" movement gained strength throughout the 70's and early 80's, teachers grappled with ways to connect those "basics" with kids' lives and raised questions about what they saw as a growing fragmentation of curriculum.(Note 2) The current focus on thematic units can be understood as an attempt to overcome that fragmentation.

There are many visions of thematic units and appropriate methods of instruction and assessment for thematic work. In most, teachers are urged to develop thematic units by identifying a topic, developing a visual representation (most often a web or concept map) of ideas and facts related to the topic, and then identifying materials and designing curriculum activities (Pigdon and Wooley, 1993). In addition, the literature reveals many questions about who can write themes (Altwerger and Flores, 1994), what content should be included, and how this content should be structured. Some authors, especially those who operate from a whole language perspective, advocate planning units almost exclusively at the classroom level and at least part of units with children (Altwerger and Flores, 1994, Harste, Short & Burke, 1988; Mills and Clyde, 1990). While we support the important ways that teachers are curriculum planners, we wonder if there are not also legitimate ways to draw upon the expertise of other teachers, scholars, and researchers in the development of thematic studies.

In order to explore the possibilities of another vision for thematic unit planning, two education department faculty, eight pre-school and elementary teachers, and a veterinary school faculty member whose specialty is the human-animal bond, worked together over a period of three years to write, field-test, and publish a thematic unit, *Pets & Me*. This action research process was documented through notes from meetings, phone conversations and interviews with test site teachers, collections of children's work, and various draft versions of the unit itself. During the process, the team confronted many issues including development of a shared theory of teaching and learning, a process and format for sharing the team's work with others, and an emerging perspective on curriculum. In particular, we came to a new understanding of the inter relationships of facts, topics, and themes in curriculum.

As teachers and children engage in the lessons from *Pets & Me*, they actively explore their relationships with animals. Learners also research, compare and contrast results, describe, analyze, and synthesize. These explorations lead to multiple opportunities for talking, reading, writing, and creating. In essence, through a variety of interactive experiences, they explore the underlying theme, visit and revisit the topic, and support their understanding through learning discrete facts and information about many different types of animals. Importantly, these learners are mindful and reflective as they construct a deeper understanding of themselves and their responsibilities to those animals they keep as pets. In this paper, we argue that this mindful and reflective approach is possible because teachers and students explicitly examine the underlying thematic question, "How can we understand the relationships among humans, other animals, and nature?"

## **DESCRIPTION OF THE THEMATIC UNIT**

*Pets & Me* is a thematic unit for pre-school through grade five that uses the human-animal bond (mainly focusing on pet ownership) as a heuristic and a topic worthy of study itself. Its

heuristic value is based on the fact that children are naturally fascinated by animals. This heuristic is widely exploited in books as is evident from the high percentage of children's books that feature animals--Pat the Bunny, animal alphabet books, the Frog and Toad series, and Winnie the Pooh stories are just some examples of this genre. But there is also a growing research base that demonstrates the strong attraction of animals for children as well as the positive influence pet ownership has upon children's social and cognitive development.

As a topic itself, learning about the human animal bond can involve language arts, math, science, social studies, physical education, art, and music. For example, the language arts are involved when students read stories, articles, or other expository works about or involving animals; when students write reflections, poetry, or stories about animals; or when students talk to each other about their reading, writing, or reflections. Math is involved when students conduct surveys of pet ownership or when they solve problems about the growth of animal populations. Observing animals either inside or outside of the classroom and developing hypotheses about the animal and its behavior provide the fundamentals of scientific literacy. Inquiry about what animals other cultures consider to be pets contributes to social studies curriculum. Resources from multiple curriculum areas are consulted so that learning in one discipline connects to learning in another. In these ways, the activities in the curriculum also stimulate growth in the following skill areas: observing and drawing inferences, interpreting and creating, thinking and deciding, research and analysis, presenting and performing.

The thematic unit is descriptive, not prescriptive. The lessons are not written as recipes, but are presented in a format designed to encourage teachers to develop their own lessons or to modify and adapt the suggested activities. Along with each "Sample Process" (lesson), we have left a blank page entitled "Your Modification" where teachers can reflect on how well the lessons worked for them and their students as well as make notes of their own modifications. This explicitly acknowledges that teachers--regardless of national, state, or district policies--must adapt materials to respond to the exigencies of their particular classrooms. (Note 3)

Consistent with emerging research on thematic and integrated instruction, the unit is based on a constructivist approach to learning (Perkins and Blythe, 1994; Brooks and Brooks, 1993). We operate on the belief that learners best understand those meanings of a concept that they create for themselves out of the data of past and present experiences and with appropriate guidance from concerned and knowledgeable "teachers." Using this belief, we have divided the unit into three cycles which create different kinds of opportunities for individuals and classes to explore and then revisit the topic question, "What makes a pet?" The outline for this exploration includes:

1. Lessons begin with what children already know. This knowledge is used to structure a broad conceptual and practical framework about pets. Children are then asked to find out what others know. What makes a pet, the values of pets, and observation of pet behavior in the man-made and natural environment are explored throughout the unit.
2. The second cycle begins with a lesson that returns to the question, "What makes a pet?" Children are given opportunities to generate and organize factual information about pets through a variety of means including data base research, library research, interviews with pet care professionals, and their own non-invasive experiments and observations. The goal here is to encourage them to reflect on what they already know about pets, to increase their knowledge, and to modify their original thinking.
3. Lessons end by returning once again to the question, "What makes a pet?" Students synthesize what they have learned and develop it into a broad framework. They demonstrate this synthesis through creating their own imaginary pets, building habitats for them, and writing pet care manuals.

These three cycles build upon children's early learning about animals. Each provides

students with a set of structured experiences that help them develop deeper levels of understanding about animals and our relationships to them. The experiences (lessons) provide multiple and multi-sensory approaches to teacher and student learning about the bond between people and animals. These experiences create multiple opportunities for an entire school to come together to examine the human-animal bond as well as for cross-grade work engaging older and younger children in the same questions. This overall collaborative and cooperative approach is designed to foster the growth of the school as a learning community.

## **THE DEVELOPMENT OF THE UNIT**

As is generally the case in the literature on thematic unit teaching, when we began and during the time we were working on *Pets and Me*, our notions of facts/information, topic, and theme all ran together. During the first year of development of the thematic unit, we worked from a notion of interrelated core concepts. We identified four concepts and organized the unit around them. These four concepts were : (1) values of animals as pets, (2) what kinds of pets are available, (3) responsibilities of pet ownership, and (4) health issues related to pet ownership. In addition, we had a notion of revisiting a central question, "What is a pet?" three times during the unit as a way of having children address their own understanding at deeper levels. We believed that children constructed their own understandings through talk, action, and reflection. We also wanted to be interdisciplinary in our approach integrating scientific exploration, children's literature, and popular media.

Working as a team, we wrote lessons and organized them in ways that enabled children and their teachers to engage in learning more about animals and pet ownership. We were generally pleased with the outcomes from both the school where the materials were developed and from the initial test sites. At the end of the unit, pairs of children designed imaginary pets and wrote Pet Care Manuals for their creations. Through these culminating projects, children demonstrated developmentally appropriate and complex understandings of the needs of animals, their life cycles, and the issues of pet ownership and care.

During the second year, however, one of the teachers pushed the team to do more. She wanted to include the full range of issues around pet ownership from deciding to adopt a pet to pet loss. She also wanted children to explore their understanding of the statement, "A pet is a way of taking nature inside." She pushed the team to include more environmental questions and to explore the use of the monarch butterfly garden and the experience of raising and releasing monarch butterflies as part of the unit. Although she did not articulate her reasons as moving toward including a thematic framework for the unit, that was the result of her efforts.

## **CRITERIA FOR A THEORY OF THEMATIC CURRICULA**

Thematic units are only one of many valuable and powerful ways of organizing curriculum. Developing *Pets & Me* taught us that if one is going to organize curriculum thematically, a clear understanding of how thematic units differ from other kinds of curricular organizations is essential.

When most authors talk about thematic units, they use the terms "unit," "theme," "topic," "essential concept," and "issue" almost interchangeably (Zemelman, Daniels & Hyde, 1993). They also talk about integration across subject areas as essential. Some, such as Pigdon and Wooley, talk about the importance of relating children's studies to "big ideas." What teachers and other curriculum planners are left with as a result of this literature is a fuzzy picture and sense that there is something important here, but what that "something" is remains ill defined.

We see the ideas represented by facts and information, topics, and themes as serving different functions in children's learning. While some authors use these concepts interchangeably

(Zemelman, Daniels & Hyde, 1993; Harste, Short & Burke, 1988; Mills and Clyde, 1990; Pappas, Keifer & Levstik, 1990; Gere et al., 1992) or avoid them altogether (Pigdon and Wooley, 1993), we want to propose seeing them as a hierarchy of distinct yet inter-related elements of curriculum development. (Note 4) The heuristic of separating theme from topic and topic from information and facts provides curriculum developers and teachers with a typology they can use to help students make increasingly sophisticated sense of their worlds. Exploring themes gives teachers and students a framework for understanding interrelationships among different levels of ideas and abstractions (from specific to abstract).

This perspective on thematic units as a format for curriculum, draws upon the ways "theme" is used in other disciplines. A theme in literature is connected to the underlying message of the story or poem. This message often helps the reader understand more about the human condition. For example, in *The Scarlet Letter* Hester's actions (the facts) can be understood in the broader context (topic) of the way Hester's life plays out in the community. But exploring the nature of responsibility for one's own life and the paradox of social membership (the theme), adds an important dimension to understanding our own lives and responsibilities to others (which is one reason we read the book).

Another link between our understanding of themes in literature and themes in curriculum is that as we study *The Scarlet Letter*, or any book, there are "right answers" at the fact and information level, but as we move closer to thematic issues, the focus shifts from looking for a "right answer" to looking for the patterns of reasoning learners use to explain their understandings. At the thematic level, there is no single right answer for many of the questions we explore, but clearly there are wrong answers or answers that do not fit within our beliefs about the nature of our civilization.

Similarly in science, data at the fact and information level are fairly clear cut. When we want to look at these data in terms of patterns for understanding, falsifying hypotheses enables us to interpret them, gain further understanding, and begin to explain why phenomenon happen as they do.

The examples from literature and science, help us understand the roles of facts/information, topics, and themes in curriculum. Recognizing the implications of the necessity of interpretation is essential to understanding the potential and power of themes in curriculum. Our experiences developing and testing *Pets & Me* demonstrates both the potential and the power.

In this emerging understanding, "facts/information," "topic," and "theme" serve different functions in children's learning. As distinct and hierarchically related elements of curriculum development they represent different layers of context and meaning with facts and information at the center, while topics and themes are successively broader rings in a set of concentric circles. See Figure 1.1, Relationships Among Facts/ Information, Topics and Themes in Curriculum.

**Figure 1.1**  
**Relationships Among Facts/Information,**  
**Topics & Themes in Curriculum**



The boundaries that separate the different layers in this representation are both permeable and intimately connected. Each layer is given meaning because of the others and the relationships among them. Consistent with our experience developing *Pets & Me*, teachers and children enter into this hierarchy at any layer. Conceptually, it does not matter where you enter; educationally, it is important that teachers and children move across all three layers, being conscious of the connections among them.

#### **Characteristics of Facts/Information:**

In this conception, the layer of facts/information means basic information and narrowly defined questions and ideas understood as discrete items. This is not unlike the substance of traditional curriculum for elementary school children. It is a focus on "the three R's," of information contained in textbooks and most textbook units. The factual level is exemplified by the focus of standardized testing programs as well as of curricula that prepare students for those tests. At the fact and information level, little attention is paid to a larger context that, among other things, gives meaning to facts and is the reason those facts were selected in the first place.

It is important to recognize that facts and information may contain an intrinsic appeal to children--children may, for example, enjoy playing with numbers and with words. Yet, in most cases it is not the sounds of the words alone that is the appeal. Nor is it typically the numbers themselves that children enjoy. Rather, children like the way facts and information enable them to manipulate or gain control over their world, and they like the access to things and ideas that comes with knowing facts and possessing information.

#### **Characteristics of Topics**

A given set of facts is fairly meaningless unless it falls under some topic. For example, "In 1492 Columbus sailed the ocean blue," is a nice but meaningless rhyme until we put it in a context that tells us what it means to sail the ocean blue, what a Columbus is, and why one ought to care what Columbus did. The traditional academic topics of European and American history provide a context in which to understand the story of Columbus. As teachers, we must be cognizant that from a Scandinavian or Native American perspective those "facts" and possibly the "topic" would take on a very different meaning.

Thus, in our model topics begin to provide a context for facts and information. They also

help us decide what information is important for children to learn. Organizing facts and information within topics allows us to guide children's engagement with the world and provide them with categories that adults have used to make sense of their world.

In this sense, topics are a way of organizing facts and discrete bits of information into classes of experiences. Typically, these facts and information are grouped into topics that fall within what Crittenden (1973) refers to as the "standard ways of knowing that humans have developed." These standard ways of knowing include the arts and the academic disciplines.

Topics can also be understood more broadly and across disciplines. For example, knowing the sequence of events of a particular story might help explain why honesty is the best policy; learning the days of the week can help one anticipate and prepare for what is going to happen; and knowing the classifications of animals can be part of deciding what kind of pet would be best in one's home. In all cases, topics are ways of grouping, categorizing or making sense of facts and information. Moreover, when exploring topic questions, facts and information are an essential element to answering that question one way rather than another.

### **Characteristics of Themes**

The exploration of themes moves us beyond the disciplines with their standard ways of knowing to constructing complex, moral dimensions of meaning that are not discipline based. In addition to learning discrete facts about a topic or studying a topic for its own sake, we learn something about our selves, our society and what it means to be human. This often means that we explore fundamental human (existential) questions. It is, for example, fruitful to study the Mayan culture and learn about that culture: its mathematical system, its calendar, its social organization, and some of its artifacts. Inclusion of the layer of theme within this study, however, would engage learners in dialogue between their own experiences and the life experiences of the Mayan people leading to the exploration of one of several possible thematic questions, including, how do people make sense of their world; what do different cultural groups create and why; or how do we understand our purpose or "project" (Greene, 1968)?

Themes allow learners to integrate the information and the topic within a context of the full range of human experience. Designing curriculum around themes provides the opportunity to engage students in a celebration of life, a conversation about what it means to be human, and a joint exploration of the world with their teachers. For individuals, thematic learning helps people grapple with their place in the world. At the aggregate level, thematic learning explores interrelations of people with institutions and the natural world.

### **Analysis of Content Using Facts/Information, Topics, and Themes**

The literature is replete with discussions of what is the appropriate content for thematic study (Stotsky, 1993). We think that is an understandable but misleading emphasis. For what really matters are the broad existential and developmentally appropriate questions the content can help you address. It is easier to say this, however, than to use it as a guide for constructing curriculum. Often teachers begin by selecting a topic and the facts and information appropriate for their students' levels of development or knowledge. Taking the next steps to uncovering and using the embedded themes is conceptually demanding and non-linear. Our experience is that we get to an understanding of the theme through engaging in a messy reciprocal process of curriculum development. We use an example reported by Sandra Stotsky (1993) to illustrate the difficulties related to sorting out these relationships.

Stotsky tells the story of a middle school thematic unit that paired the study of the Jews in Germany during World War II and the study of Japanese Internment camps in the United States at the same time. In her example, drawn from an actual case, students read one literary work



about the Holocaust and one about Japanese Internment. Stotsky found this to be inappropriate. She thought that the two events-concentration camps in Germany and internment camps in the United States-were not parallel. She wondered what underlying messages were being taught by this selection of works. She then suggested that children would develop a better understanding of the Jewish experience and the inhumanity of the Holocaust by exploring literature, art, music of European and American Jewish communities as part of their thematic study.

We agree with her suggestion but believe that it does not address the issue of underlying messages because she mixes questions about the topic and the underlying theme. By not sorting these out, her analysis still does not address the potential for broad moral understanding students might develop through study of these complex and important issues.

Our understanding of themes, topics, and facts and information suggests a different analysis. We constructed Table 1.1, Analysis of World War II Thematic Unit, using Stotsky's example. It shows that the two "events" do share similar fact and information patterns. For example, both Jews in Germany and Japanese-Americans were imprisoned and lost their property. Moreover, both actions were "legal" in that they were based on laws passed in those respective countries during the 1930's and 1940's. Thus, if one were studying the topic of how different groups were treated during W.W.II, the pairing of the two groups seems appropriate, if limited.

**Table 1.1**  
**Analysis of World War II Thematic Unit in Stotsky's Example**

	Jews in Germany	Japanese-Americans in United States
<b>Facts/Information</b>	Imprisonment Loss of property Laws against Jews  Genocide	Imprisonment Loss of property Laws limiting rights of Japanese-Americans
<b>Topic</b>	Treatment of an ethnic/racial group during WW II	Treatment of an ethnic/racial group during WW II
<b>Theme</b>	Unclear	Unclear

The pairing becomes more questionable when one begins to think about the human significance of these fact/information patterns in both their similarities and differences. That significance resides in neither the facts/information nor in the topic, but in our ability to construct an interpretation of them in the broader context of a theme (e.g., rich existential questions like "'man's' inhumanity to 'man'" or "the nature of good and evil"). The question after all is not simply to understand particular events but to understand how it is that very human tendencies can lead to very inhumane actions. The exploration of the theme would enable students to work through the conditions under which different threats to a nation's security justify different kinds of behavior. In the process, students would develop ways of seeing themselves and their actions in relation to historical and current events and explore what constitutes moral action.

Thus what seems like an appropriate, if limited, pairing of topics based on a similarity of fact patterns, can not be considered thematic curriculum. In our typology, the focus on specific events in a single historic period has the hallmark of a topic not a theme. In addition, teachers using a thematic approach would identify and address rich existential questions (what we think

Stotsky is wondering about when she questions the underlying message being conveyed through this pairing of novels). Also, students would use what they are learning in the classroom to help them make sense of and enlarge their own experiences and values.

### **Characteristics of Thematic Study**

Thus, the learning that takes place within thematic study engages teachers and children in exploring the moral dimensions of their emerging understanding of the world. In *Pets & Me*, students learn how animals live and die in the world. They also explore ways humans live in the world in relation to those animals they keep as pets. The moral and ethical issues of pet ownership are an integral part of the work students complete as they address the unit's four central concepts.

In thematic units, topics are examined from multiple disciplinary perspectives. For example, in the case of pets, children study the life cycle of the animal, its natural habitat, and its habitat as a pet. They also explore the ways in which it is represented in art, literature, music, television, and advertising. They examine the relationship between the animal and its human owner looking at both what the pet gets from the human and what the human gets from the relationship with the pet. Students understand how the pet lives in the world and they pursue in more depth standard scientific concepts such as classifications, anatomy, or physiology.

Table 1.2 demonstrates the application of this typology to the content of *Pets and Me*. Separating the content into the levels of facts and information, topics, and theme makes clear the potential for connections among the three levels of contextualization. It is important to remember that this classification does not imply that teachers and children move among the levels in a set order nor does it imply that one or the other levels is most important or should be "mastered" before other levels are addressed.

**Table 1.2**  
**Content of *Pets & Me***

- 
1. Facts and Information: Classes of animals and individual animals as pets.
    - a. Information about the ways selected animals live in the world
    - b. Information about selected animals' lives and needs
    - c. Information about ways humans and other animals interact
    - d. Information about the environment where selected animals live
  2. Topic: What is a Pet?
    - a. Values of animals as pets
    - b. Kinds of pets available
    - c. Responsibilities of pet ownership
    - d. Health issues related to pet ownership
  3. Theme: How can we understand the relationships among humans, other animals, and nature?
- 

Thematic studies also have a role to play in the development of communities of learners (Senge, 1990; Lytle and Botel, 1988; Barth, 1990). Such communities are, typically, based on inquiry, classroom discourse that is open-ended, and other learning activities in which participants work through the meaning of their studies.

In classrooms where curriculum is based on the acquisition of facts and information it is difficult to build a sense of shared inquiry. In such classrooms, answers to questions are based on

a linear and close-ended search for information. The inquiry is confined to locating the correct authority, and there is no need for extended discourse or deliberation.

It is often easy to forget that facts and information are only the beginning. Working with topics connecting to broader themes, arriving at a "right answer," even if there is one, is beside the point or just the starting point. For example, one third-grade classroom in Wylie, Texas had a fish tank. The first day of the unit children began to ask whether the fish could be pets. After all, one child said, "I can't pet them." This generated a great deal of energized discussion. By the last day of the unit, the focus of the discussion had changed. The class had, in fact, decided that the fish were pets. After all, another student said, "We take care of them." But, other children wanted to know, "What about the sea horse?" The sea horse was also a fish, but the children did not recognize or classify it as such. The teacher didn't know how to answer and turned to ask one of the authors of *Pets and Me*. The response, "What do you think?" led to a vigorous discussion during which one child said, "I don't know how to relate to that sea horse. I guess I'll have to keep working on that!" The point, they had learned, is to look at an issue from multiple perspectives and wonder about the meaning of those perspectives for their lives and for their relationships to the world around them.

## **THE THEMATIC UNIT IN USE**

One issue the team struggled with as we developed the materials was figuring out how to write materials that would be useful to teachers and students in a variety of contexts. Giboney (1994) demonstrates clearly the problems that accompany attempts to adopt written/published curriculum or pedagogic techniques exactly as they are written or presented in training programs. He argues the most successful innovations are those that professionals adapt to their own political and educational contexts. This is not surprising. Teaching, like all practices, requires that the practitioner adjust curriculum or pedagogic techniques to fit the needs of her students, the expectations of teachers and administrators in the school and school district and the expectations of parents and the school board (MacIntyre, 1981). When teachers attempt to structure learning experiences for students in ways that are inconsistent with educational norms and other organizational constraints in the school or district, those innovations are generally short lived and unsuccessful.

Knowing that successful innovation comes when teachers adapt and invent their own curriculum raises a recurring and significant tension for us between "packaged" and teacher developed curriculum. On the one hand, our understanding of thematic units, and of the messy work involved in uncovering thematic foci as they arise, requires that teachers be intimately involved in constructing the units and related materials. On the other hand, we have produced a packaged unit that seems to violate this understanding. We have not completely resolved this tension, but we have some beginning insight based on our experience with the field tests of the unit. As we describe below, we have structured the unit to encourage teachers to engage in hard, intellectual work as they move among the levels of fact/information, topic, and theme. We also explicitly encourage teachers to become learners in the classroom as they explore the theme of human-animal relationships with their students. In addition, the design of the unit invites teachers to work together in cross-grade and school-wide projects as they make the unit their own.

We explicitly designed the thematic unit to encourage every teacher to use the materials in ways she felt would work with her students and in her organizational context. This expectation is clear in the structure of each "lesson" and in the lay out of the curriculum materials. Each "lesson" is presented descriptively, as a description of how the teachers on our design team actually taught the material in their classes. Moreover, each lesson is called a "sample process," the first structural indication that we expect adaptation, not adoption. The page facing each "sample process" is blank except for the words "your modifications" at the top. This page serves

several purposes. First, it provides teachers with more than space in the margins for their modifications. Second, in giving ample space, it makes it easier for teachers to keep a year to year record of their adaptations of the lessons and notes about what worked and what did not. Conversations with teachers who have used the materials indicate that each teacher used materials in her own ways -- often within organizational constraints.

Several weeks before the unit was used as a school wide thematic unit in the T. F. Birmingham School in Wylie, Texas, teachers there met in grade-level teams and in cross grade teams to discuss the unit and how they would adapt it to their individual classroom and team needs. We also spoke with them as part of a conference call and discussed their modifications. Some of those modifications were adaptations to the learning needs of their students. Other modifications were in reaction to Texas State mandates that certain skills content be taught. These teachers were incredibly creative in making adaptations that would fit both substantive and political demands.

Field tests of the curriculum in Norristown, Pennsylvania; Wylie, Texas; Nashville; and Chicago demonstrated that one of the powerful aspects of a thematic unit is the multiple entry points, both for teachers and for students. Teachers became involved in a variety of ways. Most frequently, they (and their students) were most fascinated by the topic, pets, or the opening topic question, "What is a pet?" This is not surprising. As we explained earlier in this paper, the natural attraction humans have for pets is part of the reason so many children's books are centered either in content or in characters around pets and animals. One first-grade teacher immediately saw that she was able to group together many stories from her reading program and use them while doing other activities from *Pets & Me*. Consequently, her class completed many reading and writing activities in connection to pets. Her fourth-grade partner, however, was much more interested in having live animals in the classroom. The fourth-grade students read less about pets but had many opportunities to care for, observe, and ultimately deal with pet loss.

In almost every case, however, teachers and students developed an interest in the theme, namely, the relationships among humans, animals and nature. While this relationship is the theme, it is often most powerful in learning contexts to think in terms of a thematic question, "How can we understand the relationships among humans, other animals, and nature?" For teachers on the curriculum development team, the theme emerged over the three year writing and revision process as we realized that the topic opened opportunities to explore broader questions. Indeed, each generation of the materials expanded the opportunities for students to explore the underlying theme through an expanded set of topics and acquiring more information about those topics. While teachers and students using the materials were initially also attracted by the topic, they quickly discovered that they could not answer the topic question without becoming immersed in the theme. One of the early activities is a reflection (Carini, 1982) in which students were asked to reflect on the phrase "A pet is a way of taking nature inside." One fourth-grade student wrote:

A pet isn't like a ten speed bike. It's a toy that controls it's self [sic].

Another fourth-grader wrote:

Taking a dog inside is like taking nature inside because a dog evolved from nature and its not man made so taking it inside is like taking in a part of nature. In lots of ways you can tell there not manmad [sic.] if man had made pets they wouldn't bite they wouldn't scratch or break things. But by not being manmade they're special and unlike and a lot more fun.

Clearly, these students are working through more than what a pet is. They are making connections and distinctions between the man made world and the natural world while

comparing and contrasting phenomenon from both. They are working through their relationships with pets and with nature. In the process, they are implicitly moving from the topic to the theme.

Experience with this theme expanded as students acquired more factual information through reading and interviewing pet care professionals as well as caring for and observing an animal in class. The animals they cared for in class were not typically thought of as pets spiders, land snails and monarch butterflies. Yet, with the experience in the classroom caring for these animals, students began to revise their concept of a pet and their understanding of their relationship to nature.

Starting with a topic question also led students and teachers to acquire more and more factual information. Indeed, teachers liked starting, as the unit does, with a conceptual question that was immediately appealing to most students. The question, "What kind of animals can be pets?" serves as a powerful heuristic device to involve students in more specific, fact based, studies. These include comparative studies of what kinds of animals people keep as pets in different places (urban, suburban, rural), cultures, and times. It also leads to questions about responsibilities of pet ownership which leads nicely to a project researching individual pets: life span, health issues, environmental needs, etc.

The layers of facts/information, topic, theme can be entered at any place, but it is important to acknowledge and attend to the entire system, not just a particular layer. If we start with facts, it is important not to leave children at the level of new information, but rather to help them integrate it back into their understanding of the topic and of the broader theme. It is, after all, the topics and theme that provide a context for using facts and information in making sense of the world. Likewise, if we start with the topic question, facts are what form the substance for knowing about the topic. If we start with the thematic level, the topics and facts are necessary for understanding the relationships expressed by the theme.

As we noted earlier, thematic units are often referred to as important curriculum elements in the current literature on improving classroom practice in the elementary school (Zemelman, Daniels, and Hyde 1993). Advocates claim that thematic units will help overcome the problems with fragmentation in the curriculum, help students see the interrelationships among various ways of knowing, and provide "meaningful, conceptually and experientially rich ... explorations" (Zemelman, Daniels & Hyde 1993, p 106).

Our experiences go much further. We see the development and use of thematic units as a way of capitalizing on the shifting paradigm of schools and schooling. The paradigm is shifting away from schools as teaching organizations to thinking of schools as learning organizations. The understanding of thematic units we have developed enables teachers to move from teaching as a technical activity to teaching as a deeply personal and intellectual activity. It also enables students to experience learning that is active and deeply personal. It is through the exploration of the theme that teachers and students alike are able to transform their experiences.

While this article is based on a pre-school and elementary level project, we believe that the fact/information, topic, theme analysis has implications for secondary and post-secondary education. These implications can be seen by exploring our fundamental goals for student learning.

If we ask, "What knowledge, skills and attitudes should students demonstrate in order to graduate?" our inclination is to answer from a disciplinary perspective. We respond, that is by talking about math skills, science skills, English skills, history knowledge, etc. Building curriculum from the answer to this question keeps teachers and students focused on facts and information or topics. In other words, the curriculum has a static and disciplinary focus that makes it difficult to address thematic questions. In contrast, if we ask, "What fundamental questions do we want students to have grappled with before they graduate?" our response is usually more oriented toward broad existential questions. Building curriculum so that students explore these questions requires that students develop facility in math, science, literature, history,

etc. It is not possible to answer such questions without using the knowledge, skills, and attitudes represented within the disciplines.

The implications of this shift do not require the abandonment of the departmental structure of most schools and colleges. They do, however, require a fundamental rethinking of how we structure time (for teachers and students), courses, teacher and student interactions, and graduation requirements. While we can not make specific recommendations based on this project, it is important to raise these questions.

We close with a quote from one of the teachers who worked with us in developing *Pets & Me*. It summarizes her thoughts and feelings at the end of an extended "lesson" during which her fourth-grade students had raised monarch butterflies, planted a garden that attracts butterflies, and released the butterflies. For this teacher, exploring human-animal interactions had implications far beyond the specifics of the topics developed or facts students acquired: "The project helps the children connect to the environment and have an impact upon it. I hope it will help them to see school as a place where they can learn to make a better world. We will all see butterflies quite differently in the future." (*Pets & Me*, 1991, p.10)

## Notes

1. The rich history of Progressive Education in the United States, England, New Zealand, and Canada provides many examples of project methods, personalized instruction, and connections between school learning and moral development (Shannon, 1990). We do not address the historical perspective directly in this paper but want to acknowledge its impact on our thinking as we were attracted to and developed this project.
2. Progressive Education has always represented a challenge to the policy maker's need for standardization, control, and accountability. One interpretation of the "pendulum swing" of American education is that it grows out of the tension between social and individual agendas. On the one hand, society needs to insure that all children are being taught roughly the same skills and information at roughly the same time. On the other hand, we must acknowledge that different children from different backgrounds and with different interests and abilities will learn things at different times or at different rates.
3. The challenge is not only one of responding to [acting within] policy constraints. Publishers also place constraints on the substance and structure of curriculum materials. In our case, we had to overcome our publisher's reluctance to leave entire pages blank, except for the word "Your Modifications." It took us many meetings with the publishers to convince them that it is necessary to make it easy for teachers to modify curricular materials.
4. The work of Ausubel and other cognitive psychologists implies that the hierarchical relationship among information, topics, and themes would be best represented as a concept map with "theme" as the super ordinate concept, "topics" as the first level subordinate, and "facts and information" as the second level subordinate. As we show in figure 1.1 (at the end of this section), we understand these concepts as an embedded set with permeable boundaries.

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Harris Sokoloff is Executive Director of the Center for School Study Councils (CSSC) at the University of Pennsylvania Graduate School of Education. His responsibilities includes working with school superintendents, school boards, and district staff to help them keep pace with state-of-the-art educational and management theory, research and practice. He has worked with more than 70 educational organizations in six states on a range of organizational development and improvement projects. His consulting focuses on strategic planning, organizational redesign, and improving linkages between schools and the communities they serve.

Dr. Sokoloff and the Center for School Study Councils are working to develop a regional and Commonwealth-wide network of educators who are able to moderate deliberative dialogues that will create stronger, more supportive linkages between schools and their communities. As part of this network, he has moderated deliberative forums around the Commonwealth of Pennsylvania under a grant from the Pennsylvania Humanities Council and is working with the Philadelphia Inquirer and WHYY radio on a project called "Citizen Voices." This later project extends the idea of deliberative dialogues to include the print and electronic media, involving them as partners to the conversations. Dr. Sokoloff also directs the University of Pennsylvania Summer Public Policy Institute which trains people in the theory and practice of deliberative dialogues.

Some of Dr. Sokoloff's projects include working with the Susquehanna (PA) School District to redesign the early childhood and elementary education programs, and to build board and community support for those changes (some of this work is reported in the November 1996 issue of *School Administrator*); designing and implementing an instructional student database for the Wissahickon School and Southeast Delco School Districts; and working with the West York Area School District to improve school district and community dialogues. Dr. Sokoloff has also



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Dr. Sokoloff is also lead author of a thematic unit for pre-school and elementary school settings. Entitled "Pets & Me," the unit has been commended by the National Council of Teachers of English and has received glowing reviews from professional organizations focusing on the teaching of the humanities and the sciences. That curriculum served as the impetus for this article which appears in *EPAA*.

Dr. Sokoloff received his Bachelor's Degree in Philosophy from Temple University and a Master's in Education in Philosophy of Education and Educational Counseling, also from Temple University. In 1983, he received his Ph.D. from Syracuse University where his research focused on Philosophy of Education and Social Theory.

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