

Several years ago I was invited to make a presentation at an early childhood education conference in one of the tropical countries in West Africa. When I completed the presentation, a kindergarten teacher came up to me to express her appreciation and to let me know that she had read my books and was familiar with my work. With great enthusiasm she said, "You must come and visit my classroom. It's not far away and I want you to see what my kids are doing and to give me some suggestions about where to go next." Needless to say, I welcomed this special opportunity to visit a kindergarten classroom in tropical Africa, even though it was a private one mostly serving the children of expatriate families employed in the area by international government agencies and large Western corporations.

The kindergarten classroom seemed entirely suitable in terms of the kind of space, variety of materials, furnishing, and equipment available. The children seemed to be reasonably content with the activities in which they were engaged. But, as I looked around, particularly at the children's work mounted on the walls and displayed on tables, it occurred to me that on the basis of what was visible, this classroom could have been almost anywhere. I then said to the teacher, "Looking around at the children's work that is visible here, there's no way that I can tell that I'm not in Minneapolis!" Needless to say, the teacher was puzzled by this unexpected observation. I then shared with her my surprise that none of the children's work reflected the rich and colorful tropical environment right outside their classroom door and clearly visible through the classroom windows. On the contrary, the décor of the classroom included a number of Disney characters with banal and amusing messages, a table with more than a dozen playdough sculptures of dinosaurs and other "art" work with titles such as "My favorite color." In other words, the work of the children was such that could have been undertaken in just about any classroom anywhere in the world. This incident provoked me to thinking about what to look for when visiting classes for young children.

Basic Developmental Principles

The question of what to look for when visiting early child-hood classrooms can be addressed on the basis of a set of fundamental developmental principles. The term *principle* is used here to refer to a generalization that is sufficiently reliable that it is worthy of consideration when making important decisions and choices from among alternative possible courses of action. A principle here is considered a developmental one when it indicates how its assumptions change according to the ages and experiences likely to be associated with it of those

whose interests are to be served by its application. Outlined below are five developmental principles that can be invoked when seeking answers to the question every educator must address when creating a curriculum, namely: What should be learned?

First principle: Strengthen children's understanding of their own experience.

The first developmental principle is that the younger the children, the more the curriculum should be a plan for strengthening and deepening their knowledge and understanding of their own experience and their own environments. Thus, curriculum planning in the early years should emphasize awareness, knowledge, understanding, appreciation, and close observation of the children's own environments and experiences. This principle is a developmental one because the answers to the question of what should be learned change as children get older and gain more and more varied experiences. Thus, later on, perhaps by the age of 7 or 8 years, the curriculum should include plans for helping the children to be aware of and know, understand, and appreciate other peoples' environments-those that are far away in both time and place. However, during the early years that are usually defined as including the first 6 or 7 years of a child's life, it is developmentally appropriate for children to be examining, studying, and observing closely and systematically their own natural, as well as humanly created, surroundings. In this way the children's knowledge of things that influence their own experiences increases in both depth and accuracy.

It has been noted throughout the ages that children are born with a powerful disposition to investigate, although it may be stronger in some children than in others. Young children are natural anthropologists, social scientists, and scientists. They spontaneously put enormous amounts of time and energy into investigating whatever environments they arrive in, prying and poking around, trying to figure out what people mean, when they mean what, why they do what they do, what things are used for, where they come from, and so forth. They frequently test the limits and boundaries of their environments, all in an effort to make the best sense they can of their own experience.

Similarly, it is often said of young children that play is their natural way of learning. However, as already suggested, it is a good idea to keep in mind that it is just as natural for young children to learn through observation and investigation. In fact, anyone who spends time with a toddler is aware of how often this disposition to pry and poke around, if unsupervised, could lead to serious injury. Throughout the early years, the curriculum should capitalize on this disposition by involving children in extended indepth research on phenomena around them worthy of their understanding more deeply and more accurately. By using the term worthy here, I am suggesting that not all objects or experiences are equally worth spending time and energy on. I encountered a kindergarten class of students who were encouraged by their teacher to study their teddy bears. Almost all of the children brought at least one to the class and they were measured, weighed, drawn, and painted, and no harm was done. But, spending substantial amounts of time and energy on investigating a nearby supermarket or post office can involve children in a wide range of subtopics and opportunities to apply a wide range of early literacy and numeracy skills, as well (see Katz & Chard, 2000).

Second principle: The younger the children, the more they learn from direct firsthand experience.

The second relevant developmental principle here is that the younger the children for whom the curriculum is being generated, the more appropriate it is to include frequent opportunities for active firsthand investigation and direct observation. These investigations are generally referred to as projects (see Helm & Katz, 2001; Katz & Chard, 2000). Projects are defined as extended in-depth investigations of real phenomena in the children's own environments worthy of their deeper understanding (see also the journal Early Childhood Research & Practice. See for example, http://www.ecrp. uiuc.edu/v7n1/floerchinger.html).

The children in the West African kindergarten mentioned above were surrounded by a wide range of very colorful plants, vines, and blossoms bearing an impressive and interesting variety of seed pods from different kinds of trees that could have been collected; examined; compared by color, length, width, and number of seeds contained; and so forth. I later learned that many communities in that part of the world use some of the largest of the visible seed pods as a kind of percussion instrument because they can be shaken and made to rattle loudly and to produce interesting sounds to enhance the rhythm of performing groups. These pods could have been pried open so that the seeds could be studied closely and compared along many dimensions including their

I often urge teachers of young children to resist the temptation to engage children in studies of their "favorites," such as colors, ice cream, pies, or toys. Perhaps the teacher's intention in suggesting studies of favorite things is to follow the common admonition among educators to "start where the child is."

Visiting Early Childhood Classes

But, the study of "my favorite" things encourages children to turn their attention inward. First of all, such self-directed attention is likely to be boring; secondly, it may be supporting a tendency toward excessive preoccupation with the self, known generally as narcissism (see Katz, 1995). It seems to be more appropriate for those who are responsible for generating the curriculum for young children to include among its important goals to educate children's interests, and to alert them to phenomena outside of themselves in their environment worthy of their interest.

Third principle: The younger the children, the more they learn through interactive rather than passive processes.

A third developmental principle of relevance here is that the younger the children, the more they are likely learn through interactive processes rather than through processes that are largely passive, receptive, and reactive in nature. Thus, a curriculum for young children should include ample opportunity for interactive experiences with the human, as well as material, environment of the children. This is not to say that children do not learn from passive experiences such as listening to stories or watching television. However, many important dispositions related to children's intellectual (versus academic) development are strengthened by actively engaging in project investigations such as predicting, theorizing, hypothesizing, persisting, and so forth.

There is reason to believe that this principle is even more relevant in the case of the development and learning of young boys (cf. Bowman, Donovan, & Burns, 2001; Marcon, 2002). In many, if not most, cultures, boys seem to learn early that they are expected to be assertive, visibly active, and executive rather than passive and

reactive. Boys are more likely than girls to be motivated to take initiative and responsibility and to make their personal, as well as physical, power visible to others. A curriculum in the early years that allots large proportions of time to formal direct instructional activities and that puts children in a passive role long periods of time appears to be easier for girls to adapt to, and, in general, may be more appropriate for older children.

Fourth principle: The younger the children, the more important it is that what they are learning has horizontal versus vertical relevance.

A fourth developmental principle is that the younger the children, the more important it is that what they are learning about (e.g., knowledge, concepts, facts, information) and what they are learning to do (e.g., skills) have horizontal rather than vertical relevance. Horizontal relevance means that what the children are learning about, that is, the knowledge that they are acquiring, is meaningful on the same day, on the way home, and on the weekend. Vertical relevance means that what the children are learning about and learning to do may have limited meaning at the time, but is primarily intended to prepare them for the next class, the next grade, or the next school; its current meaning or relevance to the children has not been the basis for its inclusion in the curriculum.

Fifth principle: Children's dispositions to seek in-depth understanding of experience and events is strengthened when they have early experience of in-depth investigations.

Another feature I always look for when I visit classes for young chil-

dren is evidence of activities or projects that the children are expected to return to continue to work on during subsequent days. In so many classes, it appears to me that all materials and objects are returned to their proper places at the end of the day, almost as though no traces of the life of the previous day can be found when the children arrive the next day. However, my emphasis on signs of continuity in the children's activities is based on the assumption that young children need opportunities to wrap their minds around a worthwhile topic over extended periods of time—anywhere from a week to a few months, depending on the level of interest in the topic that is maintained. With this developmental principle related to this aspect of the curriculum, I am suggesting that unless children have early experience of what it feels like to understand something in depth, they are unlikely to develop the disposition to seek indepth understanding in the future. Thus, the curriculum is more about "uncovering" and opening up the topic than about just simply "covering" it. Of course, any topic, no matter how interesting it might be at the start of an investigation, could be thoroughly run into the ground after a while. Furthermore, it is unlikely that any topic would be equally interesting to all children in a given class. Teachers with extensive experience of conducting project work encourage several investigations on different topics to be conducted at the same time by small self-selected groups, and occasionally by an individual child. Even so, there are times when a teacher may need to say to a child who indicates that he or she has lost interest in the topic being investigated something like, "I'm sorry you're no longer interested in this topic. I hope the next project we

do will be one that is of more interest you. But, in the meantime, see what you can do to help the others with their investigation." Ultimately the teacher is responsible for noting when it would be wise to bring a particular investigation to a close.

The Development of Communicative Competence

Another important goal of a curriculum of special importance during the early years is the development of communicative competence. The term communicative competence includes more than just language development, although the latter is clearly a central aspect of it. It includes not just articulate, clear, and increasingly accurate use of the language, but also effective and appropriate self-expression to others, understanding the expressions of feelings and ideas of others, and a wide range of cognitive functions, including many kinds of reasoning.

The development and strengthening of all aspects of communicative competence requires frequent opportunities for children to be engaged in conversations and not just group sessions in which the teacher does most of the talking, asking individual children specific questions, and children passively listening to each other. Conversations are sequences of interactions characterized by each participant's contribution to the sequence being contingent (in terms of meaning) on the preceding one, even if the contingent response of one of the participants is a nod or frown or smile. It has been suggested by recent neurological research that early and frequent experience of such extended sequences of contingent interactions contribute significantly to the development of the connections between

the mid-brain and the prefrontal cortex, the latter being linked to the development of self-regulation and later competence in planfulness and task-oriented behavior (Blair, 2002).

Frequent participation in extended conversation can only occur if there is something to talk about—something that matters to the participants. The topic of conversation does not have to be fun, entertaining, or exciting, but it has to have significance and importance to those involved. The role of sequential contingent interaction is another reason for including investigation projects in the curriculum. When children are engaged in investigation projects, there are many occasions and topics that serve as a basis for genuine conversation. The conversations are related not only to the topic under investigation, but also to the progress of the work undertaken by the children themselves.

Many teachers today respond reluctantly to information and training on the implementation of the project approach with grave concerns about the state standards they are obliged to address. I suggest that reports of good project work in which young children investigate worthwhile topics can address all state standards that have been proposed (Schuler, 2000). Nevertheless, there is now ample evidence to suggest that good project investigations not only can address all state standards, but can engage children's intellects and provide contexts in which they can purposefully apply their developing academic skills, as well (Schuler, 2000).

In sum, when a classroom for young children takes into account the basic principles of young children's development, especially their intellectual development, one could expect to see that they are studying their own

environments and experiences, and that their involvement in this work extends over more than several days. In addition, one would hope to see that children are taking initiative and are in active rather than passive roles in investigating topics in depth that are meaningful to them on the same day. They should also be acquiring skills of immediate use to them and have a lot to talk about as the work proceeds. Good project work addresses all of these principles and curriculum goals when it is well done. **GCT**

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