

## **Kindergarten Readiness and Retention: A Qualitative Study of Teachers' Beliefs and Practices**

**Mary Lee Smith**

*Arizona State University*

and

**Lorrie A. Shepard**

*University of Colorado-Boulder*

*The issues concerning teachers' beliefs about and use of retention were explored in a qualitative study. Clinical interviews with teachers, participant observation in kindergarten classes, analysis of documents, and interviews with parents revealed that teachers' beliefs about the development of school readiness could be described and ordered along a dimension of nativism, that these beliefs relate to their use of retention as a solution to unreadiness or incompetence, and that elements of the organization of the schools in which they teach may also account for beliefs and practices. Teachers' endorsement of retention diverges both from extant propositional knowledge and from the perceptions of other interested groups.*

The educational reforms of the 1980s call for promotion from grade to grade on the basis of the mastery of grade-level curriculum or objectives. Another school of thought (e.g., Ilg, Ames, Haines, & Gillespie, 1978) suggests that individual differences in maturational readiness be the basis for progress through grades; children, regardless of age, should be protected from curriculum that is too advanced for their individual levels of readiness. Although these two positions have different philosophical roots, they are alike in advocating variations on the traditional pupil career that

---

The authors wish to acknowledge the thoughtful contributions of the teachers, administrators, and parents involved with the study. We also note with thanks the good work of our graduate assistants: Evelyn Belton-Kocher, Nancy Cummins, Marla Diaz, and Mary Catherine Ellwein. Among those who read and commented thoughtfully on various drafts of the paper, we would especially like to thank Nick Appleton, Gene Glass, and Alan Peshkin.

typically begins at age 5 with kindergarten and continues uniformly with correspondence between age and grade until age 18 or so. Such diversions take the form of retention in grade (until the pupil attains mastery of grade level curriculum or, alternatively, grade-appropriate readiness), transition classes between kindergarten and grade 1, or placement of 5-year-olds into developmental kindergartens. Both schools of thought challenge prevalent practice in American schools, often pejoratively labeled "social promotion." The latter might be defended as keeping age cohorts together to promote individual self-esteem or group cohesiveness. Labaree (1984) found a different rationale for such a practice: Large-scale, bureaucratic school organizations require batch instruction and batch promotion for efficient management.

Should the pupil career be driven by competence, by readiness, or by age and grade cohort uniformity? Although the clash of ideas presented here can readily be found in the popular and professional literature, one cannot be sure if they occur in similar forms in the thoughts of teachers or are reflected in the actions they take in the classroom. This study is an attempt to address this issue in such a way that understanding of beliefs and practices is carefully grounded in the social and educational contexts within which teachers work. The questions addressed initially were these: What do kindergarten teachers regard as the proper basis for promotion through early grades? What are the beliefs of teachers about the mechanisms of development and early learning? Is there any pattern that relates teachers' beliefs to retention practices? Are there patterns that relate retention practices and beliefs to what is taught, how it is taught, and to classroom organization? What in the context of the school helps account for teachers' beliefs and practices?

The topic of belief is widely encountered in psychology and philosophy and, more recently, in educational research as well. In this work, we follow the analysis of beliefs by H. H. Price (1969). A belief is that which an individual holds to be true. Following Price, a belief is a disposition of a person with respect to the truth of a proposition.

When we say of someone "he believes the proposition  $p$ " it is held that we are making a dispositional statement about him, and that this is equivalent to a series of conditional statements describing what he *would* be likely to say or do or feel if such and such circumstances were to arise. For example, he would assert the proposition (aloud, or privately to himself) if he heard someone else denying it or expressing doubt of it. He would use it, when relevant, as a premise in his inferences. If circumstances were to arise in which it made a practical difference whether  $P$  was true or false, he would act as if it were true. If  $P$  were falsified he would feel surprised, and would feel no surprise if it were verified. (p. 20)

Beliefs are like emotional attitudes in that one can believe a proposition without realizing it, and there are unconscious or repressed beliefs. Beliefs

have degrees, ranging from a vague suspicion to complete conviction. Beliefs are distinct from knowledge, in that knowledge is based on conclusive facts and truths. According to Price, "believing that" is inferior to "knowing that," but because knowledge is in short supply, belief is better than nothing. "We need beliefs for the guidance of our actions and our practical decisions . . . [and] use them (when relevant) as premises in our practical reasoning" (p. 98). Beliefs may be reasonable or unreasonable, depending on what evidence is available to the person believing and the weight of the evidence for and against the proposition. Evidence can be of several kinds: direct experience, testimony, and inference.

Applied to the present study, we use the concept of a teacher's beliefs to refer to those propositions about development and early learning that a teacher holds to be true, with what degree of credulity, with what kind and quality of evidence, in relation to what other beliefs, values, and emotional attitudes, and in light of what consequences such beliefs have in actions she<sup>1</sup> takes.

Practices refer to actions taken, in this case, recommendations and decisions to retain or promote pupils, which may reflect beliefs of teachers as well as other facets of the situation such as school and district policies.

### Background of the Study

The study reported here was embedded in a policy study commissioned by a school district. With no central district policy on processes and criteria for grade promotion, individual schools had devised their own, with the result that wide variation existed in the extent to which they retained children for a second year in kindergarten or provided transition or developmental kindergarten programs. In some schools, a fourth of the kindergartners spent 2 years in public school before first grade. In other schools, no children, or as few as 1% or 2% were retained for a second year. The district wanted to know the efficacy of these varying practices. Preliminary analysis showed that high-retaining and low-retaining schools could not be distinguished by variables such as average socioeconomic status, average levels of tested academic abilities, or ethnic or linguistic composition of the pupils.

Although schools within this district exhibited some variation on such characteristics as socioeconomic status and tested academic abilities of pupils, the district as a whole can be described as predominantly middle class, with no schools of more than 20% ethnic or linguistic minority composition. The average tested cognitive abilities and achievement of the schools were consistently above national averages. There were both rural and suburban schools, but none that could be described as urban. The population of the district was generally well educated and actively involved in educational and social issues. The district was organized so as to give individual schools autonomy in such matters as textbook selection. Al-

though curriculum guides were provided, adherence to common curricula was not strictly enforced. Nor were there accountability demands placed on schools by means of district competency examinations.

In agreeing to do the policy study, we requested and received permission to conduct a qualitative study, for two reasons. First, we believe that outcome studies such as the one we designed<sup>2</sup> cannot be interpreted adequately without thorough understanding of the social context within which the practices occur. Second, we wanted to pursue our program of research on school policies that result in diversions in pupil careers.<sup>3</sup>

### Methods of the Study

This is a qualitative study honoring the assumptions and canons of evidence suggested by Erickson (1986). Collection of data over one year's time comprised an interweaving of clinical interviews with teachers, participant observation of kindergarten classes and decisionmaking events, analysis of documents, and semistructured interviews with parents. Each of these methods is described separately.

#### Teacher Interviews

Forty of the 44 kindergarten teachers in the district were interviewed, using a semistructured, clinical interview format. In developing the interview protocol, we adopted the working assumption that teachers' beliefs are best known by inference from their case knowledge, or that which people know how to do "without being able to state what they know" (Feiman-Nemser & Floden, 1986, p. 506). Unlike formal or scientific knowledge, a teacher's case knowledge cannot be stated in the form of generalized propositions; rather, it is tied to specific events and persons within the teacher's immediate experience. Case knowledge helps the teacher decide what to do in a given circumstance, such as whether to request a tutor for a child she perceives as ill-prepared for first grade, or assign the child to a group that progresses slowly and is destined for retention. The teacher bases her decision on previous encounters with similar children in her kindergarten or in those of her mentors, as well as on the feedback she has received from parents and teachers on the results of similar interventions in the past. Thus she knows *what* to do without necessarily being able to state directly her underlying belief in propositional form, for example, "Children who are ill prepared for first grade may make up for their lack of preparation if given intensive, individual academic assistance." Thus, case knowledge is equivalent to "knowing how" rather than "knowing that" (Price, 1969). Furthermore, case knowledge is revealed in the form of stories that are told in interviews (Mishler, 1986).

Thus, for the purpose of the interviews, rather than asking directly for each teacher to state her philosophy about the nature of child development, we framed a series of indirect questions that would tap case knowledge.

For example, we asked the teachers to recall specific children they had taught and to describe in concrete terms their characteristics, such as the inability to follow a series of directions. We asked them to think of particular children who, in their opinion, had not been ready for school, to tell as much about their characteristics and circumstances as they could, and to speculate on the reasons for their lack of preparation. The interview agenda progressed from indirect to direct questions, under the assumption that the most valid and least reactive data are those related to the purpose of the study but expressed in the teacher's own words, prompted by neutral, fact-oriented questions and nondirective probes. Teachers were assured that their responses would not be associated with their names or the names of their schools. Even though the interviews were understood to be a part of the policy study, good rapport was attained. The teachers were forthright and productive, and they seemed to welcome the chance to describe their practices and provide rationales for their beliefs and programs.

The interviews averaged 1 hour in length. They were tape recorded, and the tapes were transcribed. A list of 47 categories was developed from our initial research questions, issues raised in the policy study, and categories that emerged from the participant observations, parent interviews, and initial reading of the transcripts. Transcripts were coded accordingly. From the coded transcripts, categorization schemes of teachers' beliefs about readiness and retention were constructed.

#### Participant Observations

Six schools were selected from the 26 in the district. Selection was governed by the need to capture the variability of retention practices within the district. For example, two schools with high-retaining and three with low-retaining kindergartens were selected, along with one school that had a developmental kindergarten and a transition (between kindergarten and first grade) class. Four advanced graduate students conducted the participant observations and wrote case studies. At least 30 hours of data collection were spent in each class. Although this amount of time would usually be insufficient for case studies, these had narrowly bounded goals: to characterize the curriculum, the teaching methods, and the organization of the classes; to describe any differences between the classes observed; to reflect on retention criteria and processes in the schools; and to discover any contextual features of the schools that might help us interpret other data. The authors closely supervised the students' observation, data record keeping, methods of interviewing, and the like. In addition, the observers served as informants as we began to formulate working hypotheses and initial propositions in analysis.

#### Document Collection

Many materials were made available to us, including school policies on retention, pamphlets for parents on the topic of school readiness, district

curriculum and objectives for kindergarten and first grade, existing studies of the effects of extended day kindergartens in the district, test results, pupil records, and the like. These documents extended our knowledge of the social and educational context and suggested working hypotheses for analysis.

#### *Parent Interviews*

Samples of parents of children with known characteristics were selected for interviews. The children consisted of groups who were matched at the time they first came to kindergarten on age, sex, and measured readiness, but who were either retained or not retained in kindergarten, depending on whether they attended schools with high retention practices. At the time of the interviews, the children were finishing first grade. The purpose of the interview was to ascertain the parents' assessments of their children's progress through kindergarten and first grade and readiness for second grade. In addition, we wanted to chronicle, from the parents' point of view, the decisionmaking process that resulted in the retention of some and the promotion of other, seemingly equivalent, children. We telephoned the parents selected in the sample and asked them to think back to the time the child first entered kindergarten. What was the initial encounter like? What screening was done, and what were the results? Then, how did the child progress during kindergarten? When was the possibility raised that the child should spend an extra year in school before first grade? What evidence was presented, and how was the decision made? What were the various issues raised by each party? What feelings and meanings were held and expressed?

With the parents' permission, the interviews were tape recorded. Qualitative analysis procedures were used to make sense of their responses. After multiple readings of the data, we found that responses could be categorized in three ways: (a) by time—that is, by sequence of episodes in the pupil's early career; (b) by outcome classification, of children who were retained (or otherwise spent an extra year in school before first grade), who were not retained, but promoted directly to first grade, who were recommended by the kindergarten teacher for retention but whose recommendation was refused, and who were promoted to first grade but who were going to be retained in first grade; and (c) by attitude valence (positive, negative, or neutral feelings about the process and outcome). Excerpts of data were selected to illustrate the resulting typology.

#### *Analysis of Data*

According to Erickson (1986, p. 146), to analyze data from qualitative studies is to "generate empirical assertions, largely through induction" and to "establish an evidentiary warrant" for these assertions by systematically searching for disconfirming as well as confirming data and analyzing

negative cases. Following this advice, we repeatedly and thoroughly read the entire data record accumulated from the four sources of data described above. From this reading and the questions with which the study began, we derived four empirical assertions that survived the subsequent analysis of negative cases and search for disconfirming evidence.

For example, when categories or typologies were constructed, they were verified by a second analysis from blinded data. To the extent possible, data from self-report were cross-checked with data from observation and documents. No assertion was constructed from data generated by one single research method.

Last, as a means of establishing for the reader the validity of the assertions, excerpts from the data record itself are presented so that the reader may follow the logic of the analysis. This took three forms: quotations from teachers in different categories of analysis, descriptions of retention practices and effects excerpted from interviews with parents and teachers, and descriptions of classroom and school structure. All are actual data, reorganized and presented in such a way that, according to Erickson (1986), they illustrate the interpretations we made and show the reader that the events described actually happened.

#### **Results of the Study**

The four empirical assertions are stated as follows:

Assertion 1. Teachers' beliefs about developing readiness fall along a dimension of nativism.

Assertion 2. Teachers' beliefs about developing readiness are related to retention practices.

Assertion 3. Teachers' beliefs about retention diverge from beliefs of parents and from propositional knowledge.

Assertion 4. Teachers' beliefs about developing readiness and retention practices are related to school structures.

#### *Assertion 1: Teachers' Beliefs About Readiness Fall Along a Dimension of Nativism*

Throughout the history of ideas there has existed a dimension of beliefs about human development that runs from nativism to environmentalism.<sup>4</sup> We adopted as a working assumption, both in the design of the interview agenda and in preliminary analysis, that such a dimension might exist in the beliefs of teachers. We took care, however, to avoid taking such a dimension for granted. Furthermore, reevaluation of the complete transcripts revealed that our working hypotheses could not have been detected by the teachers based on the wording of the questions. Thus, we sought information that would allow us to classify teacher beliefs along such a dimension should it exist, and to provide opportunities for teachers to express contrary or alternative beliefs.

It was clear from reading the transcripts that teachers differed among themselves in the extent to which they construed the development of school readiness as an internal, organismic process unrelated to environmental intervention (i.e., nativism), or, in contrast, as a process amenable to influence by parents, teachers, and other forces in the child's environment. As a first approximation, we ordered teachers along a dimension of nativism and environmentalism, based on a holistic interpretation of the transcripts. Then, proceeding more systematically, we identified seven categories related to beliefs about school readiness and the nature of child development: (a) constructions of child development, (b) beliefs about the rate of development of school readiness (c) sources of evidence that the teacher draws upon to conclude inadequate school readiness, (d) beliefs about whether a child not ready for school can catch up to his classmates, (e) beliefs about whether inadequate school readiness can be remedied, (f) what the best method of remediation (if any) might be, and (g) beliefs about the causes of unreadiness for first grade. Taken together, these seven categories constituted the components of the belief systems of the teacher about the nature of the development of school readiness. Each transcript was scored according to our understanding of the extent of nativism, and the teachers were ordered along the dimension. Only 2 of the 40 teachers for whom we had interview transcripts could not be classified because they expressed internally inconsistent beliefs about the categories we considered components of the belief system. For example, although they believed that the cause of unreadiness was low developmental maturation and that it could be detected on the Gesell School Readiness Test before kindergarten (two beliefs characteristic of Nativists), they also believed that teachers could intensify instruction and remedy the unreadiness (a nonnativist view).

In spite of these two negative cases, the analysis that separated Nativists from other types of belief was robust. The transcripts were blinded, and a second analyst who understood the construct of nativism read and classified a sample of the transcripts with no misclassifications. Thus the categorization scheme was confirmed. In addition, the observers were asked to characterize the teachers they observed, and there were no disconfirmations across these two methods.

The 19 teachers labeled Nativists believe that, within some normal range of environments, children become prepared for school according to an evolutionary, physiologically based unfolding of abilities. This process, which unfolds in stages, is largely or completely outside the influence of parents and teachers. The only thing teachers can do to help a child who is in a developmental stage that is not appropriate for kindergarten curriculum is to provide more time for that child to develop.

The remainder of the teachers, all of whom believed that school readiness can be influenced, fell into three types according to the sort of intervention

they believed could influence the child's readiness. Those labeled Remediationists believed that children of legal age for kindergarten are ready for school and can be taught and that what the teacher does can influence the pupil's readiness and ability to learn. These teachers believe that instruction can be managed by breaking the curriculum into segments and providing pupils with ample opportunities to learn. Children who learn this material more slowly than their peers are given remediation with the help of volunteers, parents, cross-age tutors, academic assistance programs, and the like. In general, teachers in this group believe that additional instruction can correct the deficits in readiness that may exist in some children.

Teachers of the second type were labeled Diagnostic-Prescriptive teachers because they have adopted the philosophy, prevalent in special education, that any inadequacies in school readiness in a child of legal school age occur because one of several separate traits necessary for learning and attention (e.g., auditory memory, visual-motor integration) is not intact. A deficit in any of these traits can be diagnosed and corrected by concentrated training tailored to the defect. In other words, if a diagnostician identifies a deficit in visual memory, she can prescribe a specific training program to correct the deficit. After treatment, the child will be able to function more or less normally, like his or her peers in kindergarten.

"Interactionist" is the label applied to the third type. These teachers subscribe to a stage theory of development, thus placing them closer philosophically to the Nativists. They believe, however, that readiness develops according to a complex pattern of interactions between the psychological nature of the child and the environments provided by caregivers. Followers of Dewey or the British infant school philosophy, they believe that the environment and materials should be arranged by the teacher based on an ongoing study of each child and on what interests the child has that might awaken the process of learning. These teachers believe that the social configuration of the classroom makes a difference in how children develop and learn. Children also learn from and provide environments for each other and respond to the expectations that teachers and parents have of them.

Table 1 contains the results of data reduction from the hundreds of pages of interview transcripts to a comprehensible and meaningful subset. The columns of the table represent the four types of teacher. The rows represent the seven categories of data that constitute the teachers' belief systems. Within the cells of the table are paraphrases that were constructed to represent beliefs of teachers. This display is meant to illustrate the diversity of beliefs. So that the reader can follow the logic of our method of constructing typical paraphrases, we present in the Appendix actual quotations from selected parts of the analysis.

For example, the "beliefs about development" held by Nativists (see the upper left-hand cell of Table 1) was paraphrased this way: "Development

TABLE 1  
Paraphrases of beliefs about major issues for distinct subgroups of teachers

Category of beliefs	Nativists	Diagnostic- Prescriptives	Interactionists	Remediationists
Beliefs about nature of development	<p>"Development is a physiological process such that the time when a child is ready to learn is governed by the same mechanisms that govern the time when he begins to walk. The child goes through fixed developmental stages at variable rates. Not all 5-year-olds are ready for kindergarten."</p>	<p>"Specific abilities either develop normally or dysfunctions develop. Kindergarten-aged children can learn provided one or more of these abilities is not disordered."</p>	<p>"Children go through natural stages, but progression is influenced by parents and teachers. Teachers can influence the child's ability to focus, internalize controls, and gain interest in others."</p>	<p>"Within broad limits of chronological age, children's readiness is a function of their experience, learning program, and environment."</p>
Beliefs about rates of development	<p>"Because development constitutes physiological unfolding, rates of development are smooth, continuous, with no spurts or discontinuities. The child who is 6 months behind in September will be 6 months behind in June."</p>	<p>"Rates of development are uneven and unpredictable; spurts, discontinuities and regressions are to be expected if there is an underlying dysfunction in some specific abilities."</p>	<p>"Within broad limits of chronological age, rates are not predictable, and discontinuities can occur as a result of</p>	<p>"Because learning and development are poorly understood, the teacher should expect spurts, discontinuities, and regressions related to opportunities to learn."</p>
Beliefs about evidence for lack of preparation	<p>"In many cases, you can tell the first time you see them that they are not ready; Gesell provides supporting evidence for teacher observation; tests permit an early and accurate diagnosis of readiness."</p>	<p>"The best evidence is multifactor diagnosis of specific traits and abilities, tests by clinical specialists, similar to special education staffing."</p>	<p>"The teacher can observe children's use of environment, materials, and relationships; assessment of readiness must be context-dependent; tests provide only partial indication."</p>	<p>"Teachers rely on observation throughout the year, to reveal lack of academic preparation and social immaturity; formal tests are viewed with caution."</p>
Beliefs about the possibility of catching up	<p>"There is little likelihood that a child who is developmentally behind his age-mates would close the gap that separates them."</p>	<p>"If deficits in abilities can be corrected, child can progress."</p>	<p>"You cannot predict when and under what circumstances a child will progress."</p>	<p>"A child who is less prepared than his gap given the right educational circumstances; academic assistance is required."</p>

TABLE I (continued)

Category of beliefs	Nativists	Diagnostic- Prescriptives	Interactionists	Remediationists
Beliefs about possibilities of influencing a child's preparation for school	"Because learning is governed primarily by internal mechanisms, interventions is futile with a developmentally unready child. Extra help or remediation causes pressure, frustration and compensation. Teacher cannot influence psychomotor abilities, ability to attend, social maturity, and so forth."	"Deficits can be remedied by direct intervention in the disorderability."	"The teacher can make a difference, though it is more difficult with less mature child; learning is a complex interaction between child's abilities and opportunities provided. The teacher can influence psychomotor development, attention, and emotional maturity."	"The teacher can make a difference as can the parent and other aspects of environment; within a broad range of pupil abilities, what the pupil learns is largely a function of opportunities and experiences."
Beliefs about causes of lack of preparation	"Children are not ready because of low developmental age, chronological age, sex, not IQ, small emphasis on preschool or environment."	"Children are not ready because of lack of background experiences, family stability, family inheritance of special abilities, within normal range of development."	"Children are not ready because of cognitive or emotional immaturity, stress, lack of availability of parents, limited preschool or prior academic experience, instructional failure, low expectations."	"Children are not ready because of poor intellectual ability, inattentive or unskilled parents, prior educational and enrichment experiences, the teacher or educational program."
Beliefs about what the teacher can do	"Teachers can provide child with more time to mature; place child in developmental kindergarten, preschool, send him home another year; place in slow group in class; reduce instruction below frustration level, lower expectations, boost self-concept, use manipulatives; retain in kindergarten or transition; providing academic assistance is irrelevant and harmful."	"The teacher can identify problem area, refer for professional evaluation, build up or work around problem area; adapt instruction; provide academic assistance aimed at correcting the disordered ability."	"The teacher can arrange the environment so every child can be successful; study the child to see what interests him; set up cooperative, peer teaching; individualize instruction; retain only if first-grade teachers are not likely to accommodate individual differences."	"The teacher can provide additional academic help; accommodate differences in achievement; hold high expectations, reinforce and train; work hard and encourage the pupil to work hard."
Beliefs about endpoints of kindergarten	"By the end of kindergarten, almost all children should meet a common standard."	"Most readiness skills should be mastered so that first-grade phonics can commence; differences in preparation are expected to be accommodated by first-grade teachers or special education."	"There are multiple standards and multiple ways of achieving them; children come into kindergarten variable and they leave variable; variability does not mean failure."	"Not all children will be at the same level; though mastery of skills is a goal, first-grade teachers should be able to accommodate diversity."



is a physiological process such that the time when a child is ready to learn is governed by the same mechanisms that govern the time when he begins to walk. The child passes through fixed developmental stages at variable rates. Not all 5-year-olds are ready for kindergarten." A teacher classified as nativist said this:

Some children when they come to school are ready for the school situation so that they can be able to meet the school and with not a lot of stress. . . . Other children are just not ready developmentally. And by that I mean they are not ready to let go of Mom, they're not ready to take directions from another person, and I just feel like this is a developmental stage. And that every child will eventually go through the stages. But right now in kindergarten the first part of school is just really hard on a lot of little children. . . . Some children crawl, walk, or talk early, or they have their teeth early or they cut their teeth late and there are early talkers and walkers and late talkers, and I think a lot of that tells us about developmental stages. . . . All children develop at different—at their own rate of speed. And we cannot push that development. There is no way we can say, "I want him to cut his teeth at a year old. I want him to walk." Because you cannot make a child walk, because they're not ready. You cannot make a child talk. But in our school system right now, because a child is 5 years old, everybody assumes that that 5-year-old is ready developmentally to come and meet a school situation and what it has to offer. And I really feel like that each child is an individual about how he is developing.

*Assertion 2: Teachers' Beliefs About Readiness Relate to Retention Practices*

One expects on logical grounds that teachers who believe that time alone is the remedy for children with inadequate readiness would more likely recommend an extra year of school than compensatory tutoring. Therefore, we looked for evidence to indicate a relationship between what teachers believed and their retention practices. The most reliable evidence was the rate of retention of kindergartners in the schools where each teacher taught. When this documentary evidence was not available (such as when a teacher was new to a school), we asked the teacher to report the percentage of kindergartners that were retained in her most recent class.

Figure 1 is a display constructed to illustrate this assertion. Each circle represents one teacher. The teachers are ordered from right to left according to their extent of nativism (the highest degree of nativism is farthest to the right). The vertical line represents the demarcation discovered between Nativists and non-Nativists. The four types are labeled (e.g., Remediationist). The number within each circle is the retention rate for that teacher. Those with asterisks indicate teacher-reported rates rather than official school rates. Daggers indicate negative cases. A pattern is apparent in the display, with a greater rate of retention for Nativists than for other belief

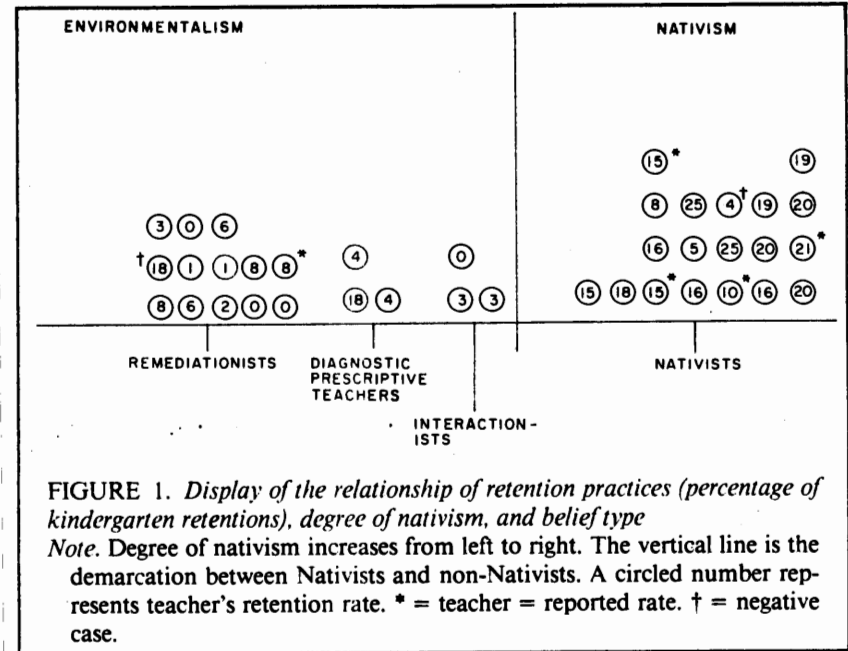


FIGURE 1. Display of the relationship of retention practices (percentage of kindergarten retentions), degree of nativism, and belief type  
 Note. Degree of nativism increases from left to right. The vertical line is the demarcation between Nativists and non-Nativists. A circled number represents teacher's retention rate. \* = teacher = reported rate. † = negative case.

types. A test of the difference in retention rates corresponding to the belief system dichotomy (Nativist vs. non-Nativist) was statistically significant ( $t = 6.15, p < .01$ ), verifying what can be seen in the display. Reclassification of the data from the two teachers whose beliefs could not be classified failed to disconfirm this assertion. The data record was examined to shed light on the negative cases. The Nativists with low retention rates had recommended about a third of the kindergartners for retention, but the parents had refused. The schools in question were in lower socioeconomic neighborhoods where parents could not bear the expense of private child-care during the half days the child would not be taken care of in the kindergarten. Nonnativist teachers with high retention rates used retention in kindergarten as a way of coping with the limited English proficiency of immigrant children in a school without satisfactory language programs. The analysis of these negative cases shows that beliefs and practices are not always congruent, but are mediated by the educational and social context.

*Assertion 3: Teachers' Beliefs About Retention Diverge From Parents' Beliefs and From Propositional Knowledge*

Considering the rich diversity in teachers' beliefs about readiness and their retention practices, there is remarkable unanimity of sentiment, even among those who rarely retain, in favor of adding a year to the pupil's



career, when the pupil lacks either the competence or the maturity for the next grade. Of course, the teachers differed with respect to the criteria they would apply to standards of maturity or competence. Among the benefits mentioned by teachers in the interviews or heard in the course of participant observation were these: An extra year provides time for the child to mature, moves a child from the bottom of his age-appropriate class to the top of the class into which he is retained, makes the child a leader, prevents a later and more painful retention, and prevents deviant behavior later in life.

Here are some characteristic statements by teachers:

Those kids who repeat tend to become the leaders. One little boy that repeated this year, last year maybe said three words and was very self-conscious. And this year he is just bubbling, and I mean he is just thrilled with himself, he has such a good, positive self-concept.

If we teach them here, and they don't make it, and we pass them on to first grade, they would not be ready. So they would in essence have had a year in kindergarten where they didn't do well, and in first they don't do well. So they're just passed on. And then after a while those children have just gotten very tired of not doing well, so either they drop out or they start ganging around with their other buddies who haven't done well. So then they get into the drug act or whatever makes us feel a little bit better about ourselves. I think we need to start right down at the very bottom, catch those babes before they start having self-image problems.

Some teachers qualified their endorsement of retention by stating that it is beneficial only for children who are immature. For children with low academic ability, low motivation, or handicaps, retention will not solve the problem. Other teachers preferred a transition program or developmental, 2-year kindergarten program to retention, still endorsing the addition of a year to the pupil career. A few others felt that retention in first grade was more effective than retention in kindergarten.

Not one teacher subscribed to the opinion that social promotion is a desirable policy for governing transitions from grade to grade. The Japanese view that *agemates* should be kept together to promote group cohesiveness and mutual responsibility (O'Hanion, 1987) was not expressed, nor was the notion that, to preserve children's self-esteem, one ought to promote them with their classmates.

Probed for their views on any risks or costs that might be associated with retention, the teachers felt that few exist, and that these are minor and temporary. As one teacher said:

One little girl had problems with it. I think the first few days she wanted to be in the first grade with her friends. But she is fine now. I feel the social-emotional peer stuff is not so present as it might be in a higher grade.

Asked whether the children ever became bored during the second year of kindergarten, one teacher expressed the typical view that the children do not remember from year to year what they did, and therefore boredom is unlikely.

The only qualification to this belief in the benefits and lack of problems teachers mentioned in connection with retention was the parents' cooperation with the decision. "There is no stigma to retention as long as the parents are supportive of it. I've had great success once I've convinced the parents that they haven't failed in any way." The teachers were careful to present the picture that the decision to retain or promote was ultimately the parents'. Evidence from the participant observation and parent interviews verified this picture in certain schools but contradicted it in others. For example, several parents reported being intimidated by teachers' having stated that the school would not be held responsible for the subsequent success or failure of the pupils if the parents insisted on promotion, or when the teachers called in "experts" to give tests to verify inadequate developmental readiness, or quoted "statistics" that show that most 5-year-old boys need to be retained. Fearing retaliation, parents capitulated. Said one, "We learned to live with it. But I never, ever want to go through anything like that again."

Teachers underestimated the degree of conflict with parents over the decision and the extent of frustration, shame, and confusion the children felt (as reported by parents). Unlike the teachers, parents were readily able to name the problems that their children experienced. For example, they mentioned physical size in relation to their grademates, derogatory comments on the part of family and neighbors, missing *agemates* who had been promoted, feelings of failure in spite of the parents' presenting the retention in a positive light, teasing by peers, boredom at having to repeat the same material, and being overconfident and careless about repeated material.

Asked to name the advantages their children received because of retention, parents repeated those indicated by the teachers, such as improved self-confidence, prevention of failure, and that "going over the same stuff gives her an advantage over the other kids."

Not having access to the children in this district, we relied on the work of Byrnes and Yamamoto (1984) for the perspective of the child who directly experiences retention. They found that stigma, stress, and shame formed part of the meanings of retention held by these children.

Other studies confirm the results of Byrnes and Yamamoto. The meta-analysis of results of studies on the effects of retention (Holmes & Matthews, 1984) showed that these effects are negative on both achievement and adjustment. Thus the beliefs of teachers about retention diverged from available evidence as well as from the beliefs of at least a substantial number of parents and pupils.

*Assertion 4: Teachers' Beliefs About Readiness and Retention Practices Relate to School Structure*

To a remarkable extent, teachers' beliefs were shared within a school. In only one out of the 26 schools in the district did teachers fall on two sides of the line we constructed to separate Nativists from non-Nativists. Nor did variables such as training or experience account for beliefs. Thus, we looked for patterns at other system levels to try to describe and account for teachers' beliefs and practices.

At the school district level, there were formal rules for the kindergarten curriculum that determined that the nature of kindergarten would be academics rather than socialization. According to guidelines from the district, the teachers must spend a certain number of minutes each day teaching reading readiness, math readiness, and language. Furthermore, the guidelines required that children at the end of kindergarten should know their letters, numbers, shapes, colors, and so on. In addition, the amount of time allocated for kindergarten is determined by the district. Except for a few extended-day programs of about 4 hours' duration, kindergartens lasted for 2½ hours. Portions of this time were allocated, according to district rules, to "specials," that is, to art, music, and physical education, for which children left the regular classroom and were taught by a specialist. This structuring of kindergarten by the district placed constraints on what teachers can do and perhaps on what they believe. When the "specials" were over and the requisite minutes had been spent on readiness skills, there was little time left for the teachers to follow the pace of little children. The reverse is true; these constraints required that teachers organize the kindergarten in such a way that academic demands are satisfied and children conform to the pace of the school.

Aside from the formal rules, informal pressures at the school level also influenced the structure of kindergarten. In some instances, parents demanded that the curriculum consist of a heavier dose (compared to that specified in the district guidelines) of reading, writing, and math and that pupils be pushed farther along a direct path toward literacy. For example, one father insisted that, because his child already knew her letters, the kindergarten as a whole should be moved into the first-grade basal reader, or his daughter's year "would be a waste of time." In this respect, the parental demands echo the reform rhetoric that calls for literacy-focused curriculum and early acquisition of skills.<sup>5</sup> This form of pressure occurred to some extent in all schools but was more deeply experienced in the half-dozen schools in more prosperous neighborhoods. In low-retaining schools, teachers had tactics for resisting it. Some teachers accepted the value of this downward push of academic curriculum into kindergarten, some worrying, for example, when children could not count to 100 or execute consonant blends.

Further informal constraints on school structure came from teachers in grades 1 and above. Data from interviews revealed some kindergarten teachers' perception that first-grade teachers expected to begin their reading programs during the first week of school, an expectation that required all incoming pupils to have mastered reading readiness skills such as letter-sound associations, beginning and ending sounds, and knowledge of some sight-words. Because these programs require a considerable degree of independent seatwork, pupils must also be ready to work independently and complete worksheets on their own. First-grade teachers in some schools, therefore, made clear their expectations to kindergarten teachers, either by direct statements or, indirectly, by sending already-promoted children back to kindergarten. At these schools, the first grade was viewed by kindergarten teachers as a harsh place from which a marginally prepared child should be protected and for which most children had to be forearmed. As a result, where the formal guidelines called for "introduction to" such things as letter-sound associations, kindergarten teachers reinterpreted requirements to mean "mastery of." Clearly, teachers went beyond the district policy to provide a fast-paced, rigorous academic experience. This general description, however, fails to explain why some schools retain fewer pupils and teachers in them hold alternative beliefs.

We used all the sources of data to categorize the schools by the ways learning opportunities were structured. For example, we characterized content of curricula and teaching methods, we coded instances of grade segregation, kindergarten teachers' perceptions of first-grade teachers' expectations, use of rigid ability groupings as the sole method of dealing with heterogeneity, availability of pullout programs for academic assistance, between-class movements, and the like. A rough categorization scheme was constructed and confirmed. From this scheme we have selected illustrations from four schools of which the pseudonyms are Fillmore, Madison, Lincoln, and Mountain Shadows.

With a few exceptions, the content of what the children throughout the district were presented was fairly uniform and failed to distinguish schools and teachers with different retention practices. Neither did the teaching methods employed, although there was more diversity among schools in the latter. Emphasis was usually placed on phonics instruction, with a sprinkling of language experience methods in some schools.

A great deal of attention was devoted to behavioral methods for fitting the children to the structure of the school (the "hidden curriculum"). The developmental kindergarten at Fillmore is illustrative, differing in degree but not in kind from the programming of others. Of the 2½-hour day, 30 minutes is spent getting settled in for the "opening," listening to a 10-minute story, taking a 15-minute recess, and, for 4 days per week, going to another classroom for a 30-minute special. On the day when there is no special class, the children have free time, which is the only time that is not

programmed by the teacher and that is devoted to pupil-generated interests. Activities designed to promote readiness for the reading and math curriculum are worksheets (e.g., "circle all the numbers on the page," "circle all the things that begin with 's,'" "trace all the pictures that are squares") and manipulatives ("count all the beans in the dish"). Whereas the children may have studied three or four letters or words, they will have heard more than 60 statements of rules—some repeated many times—as well as reprimands for breaking rules. Rules are instituted for the level of noise that can be tolerated in different activities. Rules determine how children must turn in papers, line up for drinks, use scissors, select books, listen to tapes, and clean up. Children are expected to know the rules for the maximum number that can play a particular game. There are rules that require children to raise their hands before speaking and lower their heads to their desks to signal completion of a task. In addition, perhaps as much as 10% of the content of what was taught had to do with explicit training in following directions and filling out worksheets.

Even in the nativist intellectual environment of Fillmore, there was remarkably little emphasis on designing instruction based on the needs, interests, or "developmental readiness level" of the children. The needs of the school for order and efficiency seemed to predominate. Children who dawdle at the drinking fountain, hold their crayons awkwardly, fall asleep during the story, or pester their neighbors steal time from the harried teacher who needs to drill the ABCs.

Although the curriculum and methods of kindergarten did not form any consistent patterns with retention, we found differences in the ways schools allocated learning opportunities to children and to their organizational structures as a whole. High-retaining schools were characterized as more bureaucratic and as having a greater degree of grade segregation. (See Labaree, 1984, and Wise, 1979, for analyses of bureaucratic school organization.)

Fillmore, once again, is illustrative of the group of bureaucratic schools. At the kindergarten "roundup" the previous March, parents of children of legal school age (4 years, 11 months by September 1) are informed of Fillmore's organization. In March, before they intend to enter, all children must be tested on the Gesell. Those who score below the developmental age of 4½ (or 5 by September 1) are offered (though this verb suggests a stronger sense of choice than is actually conveyed) the chance to enroll in Developmental Kindergarten. After completing Developmental Kindergarten (which no one repeats), the child progresses to Regular Kindergarten. Children with higher scores, as well as those whose parents decline the chance for Developmental Kindergarten, enroll in Regular Kindergarten. Of these, some will be asked to repeat Regular Kindergarten for a second year or enter a transition, or "prefirst grade," based on teacher judgment or another administration of the Gesell. Others are promoted directly to

first grade. There is no repeating of prefirst grade, nor is there a second retention in kindergarten. Although in theory the possibility exists, there is no progressing upward; if a child placed in Developmental Kindergarten were to show a surge of progress in November, the child would not be advanced into Regular Kindergarten but would complete the year where he or she is. Early admissions, such as that of a 4-year-old who tests out above 4.5, are almost nonexistent. Nor would a 5-year-old who was developmentally 7 be allowed to enter first grade. Backward transitions do exist, however. For example, a child placed by virtue of the Gesell score into Regular Kindergarten may be judged by his teacher to be unready and sent back to Developmental Kindergarten (or from first grade to Regular Kindergarten or prefirst). Children who are promoted from kindergarten to first in another school and move into Fillmore's attendance area over the summer may be judged unready by the first-grade teacher, who then sends them back to kindergarten for the rest of the year. We found from observations and interviews that children were slotted into this structure in regimented fashion. The fate of their learning opportunities and pupil careers was decided early and rarely reconsidered. The positive effect of the system, according to the teachers, is that it allows all children to enter first grade "on an equal footing." First-grade teachers, as a result, can commence their basal reading program without the need for individualizing instruction for children who still cannot discriminate beginning sounds.

At more bureaucratic and grade-segregated schools such as Fillmore and Madison, teachers had more rigid ideas about what the correct content of a grade should be, standards of proficiency, and the like. It was common practice for teachers to send back a grade children whom they perceived not to have "the background for this class" or to vilify teachers of earlier grades who do not retain children who are short of mastery of grade-level standards. A kindergarten teacher described first grade at Madison in this way:

[The first grade teachers] would not be able to teach the reading from the curriculum if our children didn't learn the alphabet and the sounds and didn't learn the numbers and didn't learn how to approach sitting down and writing and holding the pencil and doing these kinds of things; they would not be able to go on with their curriculum because they would have to teach the readiness first and then teach first-grade curriculum.

From the low-retaining schools like Lincoln, we found in the participant observation data that teachers in different grades worked cooperatively. For example, a second-grade teacher of a child reading at the first-grade level consults with the first-grade teacher on appropriate materials, or perhaps that child spends 1 hour a day in the first-grade classroom for extra reading instruction, but the rest of the day is spent in second grade.

Accelerated students likewise pass back and forth between classes of different grades, without the need to move permanently. Teachers at Lincoln seem willing to go slower or faster with certain children and feel more flexible about what constitutes grade level instruction.

A kindergarten teacher at Lincoln had this to say:

We would like them to know all their letters and sounds when they go out of here. But there is generally a group that goes out of here who needs further help with those, and the first-grade teachers are very comfortable with that. Our school's philosophy is that you take the child where you find them and move them to the extent of their abilities.

Our observations confirmed that teachers at Lincoln acted upon these beliefs.

In schools with few retentions, teachers dealt with individual differences in more fluid and less permanent ways than teachers did in high-retaining schools. In schools like Lincoln (as we learned from participant observation), teachers had aggressively recruited parents, neighbors, and university students to tutor children on specific areas of difficulty. Children from higher grades were also brought in as tutors. Teachers felt that these short-term solutions are effective and kept children with their peers in some tasks while difficulties in the other tasks were being corrected. In these schools, ability groups, if they were used at all, were reassessed on a regular basis so that expectations would not be crystallized into unequal learning opportunities. At Madison, a boy having similar difficulty was sent home for a year or assigned to a color-coded group and likely to remain in that group for the year. It is typical for the child to spend most of his time in nonacademic activities, for example, in unsupervised time at the water table. Thus the teacher had organized his learning opportunities in such a way that he would be free from the stress of academic learning, would also be free of the competition (or viewed alternatively from the opportunity for peer learning) of more advanced classmates, and the teacher's expectations for him would be negatively structured. Retention is almost as sure as it would have been had he enrolled at Fillmore and been tested into the Developmental Kindergarten sequence.

Mountain Shadows Elementary School is the official alternative school in the district, comprised of carefully selected teachers who variously claimed allegiance to the labels "experiential education" or "whole language education." Curriculum in this school is pupil directed rather than teacher or program directed. Two of the teachers categorized as Interactionists taught there. What stands out clearly in the studies of Mountain Shadows is, first, its nonbureaucratic organization and, second, the prevailing view of curriculum. There were no standards that determined where children in a particular grade should be performing. One teacher said, "Yes, we would like them to know their letters by the end of kindergarten,

but if they don't, the first-grade teacher can accommodate. If the child is not reading until the end of second grade, we don't get disturbed, as long as he is working and interested and growing."

Neither is there a climate among the teachers that conveys the feeling, "this child does not belong in this grade" or "is not capable of third-grade work." Ideas about curriculum contradict the philosophy that there is a natural (as opposed to a socially constructed) standard content for each grade level—that it can be broken down into small learning activities, sequenced, drilled until mastery, tested in standardized way, and so on. Instead, teachers accepted the possibility of spiraling, sudden reorganizations, intuitive leaps to understanding, false starts, regressions, and other unpredictable paths to learning, all of which must be facilitated by flexible teachers in flexible school organizations. As a consequence, retention was not a common practice at Mountain Shadows.

This analysis demonstrated that retention practices are related to, and form an integral part of, school structure—how teaching and learning opportunities are organized, both formally and informally. The official district curriculum set a formal organizational context for teachers' beliefs and practices. Associated with reform rhetoric, the souped-up expectations for kindergarten performance as well as parental pressure for academics set a social context that affected teachers' beliefs. The resulting curriculum, teaching methods, and organization of kindergartens may be too severe for some children. To protect them from inappropriately difficult schooling, teachers may have used practices such as retention and couched them in the nativist theory of child development. In other words, teachers' use of retention and beliefs in the nativist theory of development may have been a response to inappropriately difficult and standardized curriculum and to rigid school organization and severe standards for academic performance and behavior. In schools with low retention rates, teachers may have resisted informal pressures more successfully and may have been better able to individualize instruction or provide alternative methods for dealing with unequal readiness and competence. Alternatively, teachers with strong beliefs may have been instrumental in creating the school structures that were found to relate to retention practices.

### Discussion

In this study we found that teachers believe sets of propositions about how children develop readiness for school and how this development can best be dealt with. The sets of propositions believed by individual teachers are, for the most part, coherent and internally consistent. Among teachers, however, interesting variation exists in what teachers believe and how they act on these beliefs. The dimension that cuts most clearly across this variation is that of nativism. In this regard, beliefs relate to practice in patterned ways. Moreover, the beliefs held by individuals are related to

beliefs held by others in the same environment, though it is quite unclear about the cause of the similarities. Beliefs appear to be interwoven with school structure and social climate. Despite the variations in beliefs, we found that overt confrontations between belief types are rare. Nor is the available evidence against one's beliefs given much attention or credence. The question about whether teacher beliefs such as these are justified awaits further research, probably using a critical paradigm. Particularly, this research should address whether closely held and unquestioned beliefs constitute an ideology that protects some interests and hurts others. The present study showed how beliefs could be revealed in context and typified in understandable ways. We found that teachers believe that the pupil career should be driven by competence or readiness rather than by social promotion and that for the most part, they act according to these beliefs.

## APPENDIX

### *Quotations illustrating construction of paraphrases in teacher belief systems*

We paraphrased "Beliefs about Rate of Development" held by Nativists in this way: "Because development constitutes physiological unfolding, rates of development are smooth, continuous, with no spurts or discontinuities. The child who is 6 months behind peers in September will be 6 months behind in May." A typical quotation that led to this paraphrase follows:

You do see improvement [in the unready child over the course of the school year], but there's also improvement in other children, and they are showing us that they are really ready to go on. They want to do first-grade work. But this child is still playing. And you see the young that comes through . . . . But you see a lot of times at the end of the school year the child who is not quite ready for a school situation at the first of the year. By the end of the year, he is functioning about like the other children were when school began.

In contrast, "Beliefs about Rate of Development" held by Remediationists were paraphrased, "Because learning and development are poorly understood, the teacher should expect spurts, discontinuities, and regressions in relation to opportunities to learn." As one Remediationist said:

Some children have parents who don't help them, don't play with them, all of the educational things that children generally learn at home. Some parents are not able to give the children some of those 3-, 4-, and five-year-old skills because they just don't have those skills themselves. So those children come in, and if they're able to learn, they learn very rapidly. But you have that first month where you can't tell whether they are children who can learn or can't learn or are slow learners or what. You have to give them time to adjust to the kind of atmosphere that we have here at school. And sometimes they just amaze you. That's why you have to keep your expectations up and say, "Hey, forget that first impression you had," and do it as near for the individual as you can.

Finally, the words of teachers provide the best evidence for the diversity of beliefs when they answer the question, "Is there anything the teacher can do about [a particular] kindergartner who is not prepared for first grade?"

#### A Nativist:

He's young. He's a boy and very low in a lot of those areas like following directions, attending, and things like that. I just feel he needs another year to get him ready for first grade. Just to give him a big start. If he doesn't, school's going to be a struggle for him. If he's struggling now in kindergarten what will it ever be like in first and second grade? When I present that to parents, I just say they need another year just to grow, a catch-up time. Then if the parents agree, we take the pressure off, probably by giving him different expectations than I will give the other kids. I'm worried about parents thinking they can push them ahead by working with them. If they're not getting it from what we're teaching, it's probably because they're not ready to do it; and all this work is going to frustrate parents terribly and it's not going to really help the child a lot and it may frustrate her terribly.

#### A Remediationist:

I think we as educators have to give them the most benefit of the doubt or do something different and help that child. And maybe the way we taught it is not correct. Maybe we ought to change our style or drill or do something different and help that child. And I think if you marked them and said, "If he doesn't get it now, he'll never get it. We'll try for another year of maturity, maybe he'll get it next year," I think you give up.

#### A Diagnostic-Prescriptive Teacher:

You always have children who can handle everything else but have problems with visual motor coordination, and those children probably are going to have those problems so that that wouldn't be any reason for retention. We have our academic assistance program, and children that are showing these problems work there. If a child absolutely couldn't listen, I'd certainly try very hard to find out what the problem is before wanting to keep him in kindergarten another year. The reason he can't attend may be because he has an auditory problem. If he has this block or a problem, then he's got to learn to work around that to compensate for it, and that's what we'll try to give him are ways to compensate.

#### An Interactionist:

With the variety of materials we have in experiential education, the child will plug in right where he is comfortable. And you can see right away by the way the child works with materials the kinds of experiences he is going to need that year. Every child can be successful in this classroom, and I'm not sure that's true of a very paper-oriented, teacher-directed kindergarten where each child is making the same clown face or cat. When there is a wide range of kids, you've got to offer a wide range of experiences.

## Notes

<sup>1</sup> All teachers interviewed for this study were women.

<sup>2</sup> The results of the quantitative study are available in Shepard and Smith (1987). The full report (Shepard & Smith, 1985) can be obtained from the district; for price information, write to Dr. George Kretke, Boulder Valley Public Schools, 6500 E. Arapahoe Ave., Boulder, CO 80301.

<sup>3</sup> We believe that it is important for the reader to be able to evaluate research studies in the light of the human and institutional purposes that motivated them. In our conduct of policy research, we are committed to the notion that the results

should serve educational and democratic functions so that all stakeholders can participate in policy formation in more enlightened ways. Still, some teachers may have reacted to our presence and our questions as if we were hired to serve the interests of the administrators who commissioned the study or as if their programs were threatened by the results. We tried to build in as many checks as possible, but the reader must judge.

<sup>4</sup> The dimension of nativism and environmentalism recurs in the history of philosophy and psychology (Smith, 1983) and in the ideas embedded in early childhood education (Weber, 1986). Nativism as a philosophy holds that nearly all functions of the organism, including the mental ones such as perception, are innate rather than acquired through the senses. Constitutional structures are inherited and predetermined. Weber stated that Gesell's theoretical and practical ideas fall into this intellectual camp. That is, the belief that the deterministic principles of developing school readiness fall primarily in innate and developing physiological and constitutional structures out of which the psychological structures underlying learning unfold. In contrast, from the empiricist philosophical traditions, the deterministic principles of development occur in the social environment. The individual can be quite totally structured by events and conditions in his or her social and cultural milieu. Weber names associationism, additive learning, behavioral engineering, connectionism, reinforcement principles with this camp. We should note that the extremes of environmentalism were not expressed by teachers in this study. Nor do we claim that the nativist views, many of which were extreme, are exact interpretations of the work of the Gesell Institute. We operated inductively to discover what the beliefs of the teachers actually were.

<sup>5</sup> Refer to Weber (1986) for alternative ideas about the nature of kindergarten.

### References

- Byrnes, D., & Yamamoto, K. (1984). *Academic retention: An inside look*. Unpublished paper, Utah State University, Logan.
- Erickson, F. (1986). Qualitative methods in research on teaching. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 119-161). New York: Macmillan.
- Feiman-Nemser, S., & Floden, R. E. (1986). The cultures of teaching. In M. C. Wittrock (Ed.), *Handbook of research on teaching* (3rd ed., pp. 505-526). New York: Macmillan.
- Holmes, T. M., & Matthews, K. M. (1984). The effects of nonpromotion on elementary and junior high school pupils. *Review of Educational Research*, 54, 225-236.
- Ilg, F. L., Ames, L. B., Haines, J., & Gillespie, C. (1978). *School readiness: Behavior tests used at the Gesell Institute*. New Haven, CT: Gesell Institute of Human Development.
- Labaree, D. F. (1984). Setting the standard: Alternative patterns for student promotion. *Harvard Educational Review*, 54, 67-87.
- Mishler, E. G. (1986). *Research interviewing*. Cambridge, MA: Harvard University Press.
- O'Hanion, S. (1987). Notes on Japan from an American schoolteacher. *Phi Delta Kappan*, 68, 360-367.
- Price, H. H. (1969). *Beliefs*. London: Allen and Unwin.

- Shepard, L. A., & Smith, M. L. (1985) *Boulder Valley kindergarten study: Retention practices and retention effects*. Boulder, CO: Boulder Valley Public Schools.
- Shepard, L. A., & Smith, M. L. (1987). Effects of kindergarten retention at the end of first grade. *Psychology in the Schools*, 24, 346-357.
- Smith, S. (1983). *Ideas of the great psychologists*. New York: Harper & Row.
- Weber, E. (1986). *Ideas influencing early childhood education*. New York: Teachers College Press.
- Wise, A. E. (1979). *Legislated learning: The bureaucratization of the American classroom*. Berkeley: University of California Press.

### Authors

- MARY LEE SMITH, Professor, College of Education, Arizona State University, Tempe, AZ 85287-0611. *Specializations*: qualitative research methodology, policy studies.
- LORRIE A. SHEPARD, Professor, School of Education, Campus Box 249, University of Colorado-Boulder, Boulder, CO 80309. *Specializations*: psychometrics and educational policy.