A cross-curricular comparison focused on learner interpretations of beginning reading and writing instruction in skills-based and whole language inner-city classrooms across kindergarten and first grade. Subjects, 48 low socioeconomic-status students in four classrooms in two midwestern cities, were observed during literacy instruction twice weekly for two years. Data included field notes, transcripts of reading and writing episodes, student papers, and pre/post written language measures. Qualitative findings indicated similarity in learner concern about accuracy. Cross-curricular differences centered on applications of phonics knowledge, responses to literature, coping strategies of learners experiencing difficulty, and learner perceptions of themselves as readers and writers. Quantitative analyses indicated a significant difference in written narrative register favoring whole language learners. (Contains 84 references and seven tables of data. A sample grid of learner patterns is attached.) (Author/RS)
A COMPARISON OF INNER-CITY CHILDREN’S INTERPRETATIONS OF READING AND WRITING INSTRUCTION IN THE EARLY GRADES IN SKILLS-BASED AND WHOLE LANGUAGE CLASSROOMS

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Running Head: Learner Interpretations
Abstract

This cross-curricular comparison focused on learner interpretations of beginning reading and writing instruction in skills-based and whole language inner-city classrooms across kindergarten and first grade. Low-SES focal learners in each curriculum were observed during literacy instruction twice weekly for 2 years. Data included field notes, transcripts of reading and writing episodes, student papers, and pre/post written language measures. Qualitative findings indicated similarity in learner concern about accuracy. Cross-curricular differences centered on applications of phonics knowledge, responses to literature, coping strategies of learners experiencing difficulty, and learner perceptions of themselves as readers and writers. Quantitative analyses indicated a significant difference on written narrative register favoring whole language learners.
This cross-curricular comparison was initiated to shed light on two issues: first, how inner-city children make sense of and interpret their beginning reading and writing instruction in the early grades of school, and second, how learners' interpretations may differ when they experience skills-based or whole language classroom programs. The comparison, therefore, addresses the consequences of differing literacy curricula as they are evident in children's interpretations. We have chosen skills-based and whole language curricula because they are widely spread and draw on sharply contrasting notions of teaching and learning. Our focus on inner-city children grows from the concern that these children are often particularly vulnerable to the vicissitudes of instruction. We find the research documenting the pervasive failure of this group in literacy learning particularly troubling and see the need for research that explores the effects of curricula as documented from the learner's perspective.

Previous research on inner-city children has addressed sociological issues (Ogbu, 1985), family contexts (Taylor & Dorsey-Gaines, 1988), and the influence of instructional factors such as materials, grouping arrangements, and social contexts (Au, 1991; Bloome & Green, 1984). More recent studies have addressed children's sense-making within specific

While patterns of failure among inner-city children in learning to read and write in the early grades have been well documented (McGill-Franzen & Allington, 1991; Smith-Burke, 1989), few studies have sought children's interpretations of their initial school experiences in reading and writing. Child-centered interpretations of learning to read and write are particularly important in the context of current debates about differing instructional approaches. In order to provide productive instructional contexts for beginning readers and writers in inner-city schools, educators must know how these children experience skills-based and whole language programs and what consequences may arise.

This cross-curricular comparison was a two-step process; each curriculum was investigated separately and then the overall comparison was conducted. The two studies involved were an investigation of sense-making in skills-based classrooms (Dahl, Purcell-Gates, & McIntyre, 1989) and a study of learner interpretations in whole language classrooms (Dahl & Freppon, 1992). Both studies were designed as ethnographies so that
emergent designs and multiple data sources could be used to generate detailed and layered descriptions of children's learning. We wanted to examine the knowledge being acquired by learners (their hypotheses) and to investigate how children's opportunities, interactions, and processes of learning led to the construction of particular models of sense-making. The cross-curricular comparison was an ethnology, a comparative analysis of multiple entities (Goetz & LeCompte, 1984). It was conducted by tracing a group of students through a series of comparable data in the skills-based and whole language settings. (See Griffin, Cole, & Newman, 1982, for a discussion of "tracer units"). The thick description, original contexts, and interpretations of each study were preserved in the comparative analysis (Brown, 1990). The focus was on similarities and differences of inner-city children's experiences and knowledge, their sense making, across these contrasting literacy curricula.

Theoretical perspectives

Within each study, children's learning was viewed as transactive. Descriptions of learning events accounted for ways that learner knowledge and patterns of action, social and cultural contexts, and programs of instruction were shaped and transformed in relation to each other. Viewing language learning through a
transactional lens meant accounting for the learner's actions and behaviors during instruction as well as accounting for the ways each learner's linguistic-experiential reservoir, background, and stance influenced those actions (Rosenblatt, 1989).

Within this transactive frame, we utilized two main theoretical perspectives. The first of these was the view that classroom reading and writing contexts are socio-psycholinguistic. Learning about reading and writing and engaging in both processes occurs in dynamic contexts (Bloome & Green, 1984; Dyson, 1991). The sense learners make depends on social and cultural classroom contexts (Green & Meyer, 1991) and the children's own evolving understandings of written language (Dahl, 1993; Meyers, 1992). Meanings are shaped by transactions among these and other factors (Rosenblatt, 1985). Classroom milieu, the child's individual stance toward literacy (Bussis, Chittenden, Amarel, & Klausner, 1985; Purcell-Gates & Dahl, 1991), development in literacy learning (Clay, 1975; Sulzby, 1985), and the dynamics within specific learning events shape and influence knowledge construction and motivation (Dahl & Freppon, 1991).

The second strand centered on the theoretical differences between the instructional approaches involved in this comparison. The skills-based
curriculum is based on the idea that written language is learned through teacher-directed lessons and practiced as discrete skills that are taught sequentially. It uses specific reading and writing tasks as vehicles for skill acquisition and emphasizes a standard of accuracy and neatness as children engage in reading and writing (Knapp & Shields, 1990). Materials, usually in the form of basal readers, worksheets, and writing workbooks, are viewed as instruments for learning specific skills, and the curriculum is centered on the development of reading and writing proficiency (DeFord, 1984). In the skills-based classroom the role of the student is to learn and integrate specific skills, participate in instruction, and engage in assigned skill practice. The teacher is responsible for structuring learner activities, providing instruction, and monitoring learner progress.

In contrast, the whole language perspective is based on the idea that written language is learned primarily in meaning-centered and functional ways, and reading and writing are learned from whole to part by engagement in the processes themselves (Edelsky, 1991; Goodman, 1986). Whole language classrooms include a variety of printed materials (trade books, catalogs, student-authored works, etc.), and students regularly write about self-selected topics in sustained writing.
perious. Through daily choices of reading materials and writing topics the student plays a significant role in shaping his or her own learning. The teacher "leads from behind" (Newman, 1985), demonstrating reading and writing behaviors, instructing directly, and supporting children's efforts to learn. Thus, the curriculum is primarily learner-centered and driven by a view of children as active language learners (Halliday, 1978; Holdaway, 1979; Wells, 1986).

Review of related research

Research in three general areas informed this comparison. The first was a group of studies adopting the situated/sociocultural perspective in the study of children's literacy learning. A second included both emergent literacy explanations of reading and writing development and documentation of sociocultural influences on the success or failure of low-SES children in school. The final area of related literature was research exploring instructional dimensions that influence children's literacy learning.

Situated sociocultural perspective. In their British study Edwards and Mercer (1987) investigated ways that knowledge is transmitted and received in elementary classrooms. Their research was based on the premise that human thought, understandings, and knowledge construction are intrinsically social and
cultural. In Common Knowledge (1987), these researchers describe how the process of education, investigated primarily through the analysis of classroom discourse, imparts different kinds of knowledge. Much of what children learn in classrooms is not the intended aim of instruction but rather other, "hidden agenda" knowledge rooted in the philosophy of instruction itself. Thus, most instruction aimed at transmitting general or decontextualized knowledge inevitably also imparts common knowledge that is embedded in the talk and actions of everyday classroom life.

In the United States, researchers have used ethnographic perspectives to explore routine classroom events that influence young children's sense-making (Cochran-Smith, 1984; Dyson, 1989, 1991; Rowe, 1989). Cochran-Smith (1984) documented how contextualized story reading events helped children learn unique language strategies needed to interpret stories. These language strategies were conveyed through teacher/student social interactions during read-alouds. In her investigation of children's writing, Dyson (1991) described how the child's interest, ordinary classroom interactions, and the larger social world influenced writing. Similarly, research analyzing preschool children's social interactions at the writing
table (Rowe, 1989) documented the social dimensions of learning and their influence as children posed, tested, and revised their hypotheses about literacy. Children learned the roles of author and audience as they interacted with each other and with their teachers. These investigations demonstrate the importance of understanding the social and cultural milieu of classrooms as contexts shaping literacy development.

In the 1990s, ethnographic investigations continued to explore additional dimensions of children's literacy learning in instructional settings. For example, Kantor, Miller, and Fernie (1992) adopted a situated perspective which acknowledged the importance of classroom social and cultural life. These researchers studied the ways literacy was integral in various classroom contexts. For example, at the art table children focused on merging media and print, while in the block area literacy served to facilitate play and friendship in structuring "rights" and "rules." Results indicated that varying classroom contexts shaped the nature of literacy events and outcomes. A related study by Neuman and Roskos (1992) revealed the influence of classroom environment and documented the effects of literacy objects in the classroom. The presence of books and writing materials merged with and shaped the talk and actions related to
literacy in preschoolers' play. The study showed that inclusion of literacy objects in classroom environments increased the quantity and quality of children's literacy activity during play. These studies, in general, underscore the influence of social contexts and classroom structures on early literacy development in schools.

**Emergent literacy explanations.** Research addressing emergent literacy has documented that young learners are aware of written language in their environment and begin their journeys as readers and writers by participating in home literacy events (Holdaway, 1979). The amount and nature of these early experiences affects later success in learning to read and write (Harste, Burke, & Woodward, 1981; Teale, 1986). Events that help children learn that print helps "get things done" (Teale & Sulzby, 1986, p. 28) and early storybook routines shape children's interpretations of literate activity (Gibson, 1989; Harste, Burke, & Woodward, 1983; Heath, 1983; Taylor, 1983; Teale, 1984; Wells, 1986).

Sociocultural mores about literacy permeate these emergent literacy experiences (Ferriero & Teberosky, 1982; Heath, 1982; Schieffelin & Cochran-Smith, 1984). Societal orientations inform children about the ways oral and written language are used in their community.
and shape interpretations of school-based literacy instruction (Delpit, 1986, 1988). When the expectations of schooling are in conflict with these sociocultural mores, learners experience difficulty and often reject or fail to identify with school-based concepts (Taylor & Dorsey-Gaines, 1988). The literature on at-risk populations indicates that cultural conflicts affect school success (Donmoyer & Kos, 1993; Jordan, Tharp, & Baird-Vogt, 1992; Mitchell, 1992). Intervention programs and attempts to balance schools racially have not reversed the overall pattern that low-SES children often fail to achieve satisfactory progress in reading and writing (Ogbu, 1985; Pelligrini, 1991; Trueba, 1988). Recurring analyses of Chapter One programs and special remedial reading efforts often document the failure of such programs to close the gap between these learners and their grade-level counterparts (McGill-Franzen & Allington, 1991).

**Instructional dimensions.** Classic studies of reading instruction have contributed to our understanding of the influence of different kinds of instruction on literacy learning (Bond & Dykstra, 1967; DeLawter, 1970; MacKinnon, 1959). These investigations have focused primarily on the outcomes of reading skills under specific instructional conditions. For
example, MacKinnon's (1959) work investigated reading improvement when children read with a tutor and with peers. More recent studies examined cultural factors and literacy acquisition (Au, 1991) and children's sense-making under differing classroom conditions (Preppon, 1991). Preppon's comparative study focused on children's interpretations in skills-based and whole language classrooms but was limited to average readers and their concepts about the purpose and nature of reading. While these studies have described instructional differences and specific outcomes, we have yet to document children's interpretations of instruction in depth and over time in order to more fully understand what learners experience in contrasting curricula.

The current investigation, as a cross-curricular comparison, extends this body of research in a number of ways; it documents learner activity and interpretations of reading and writing across 2 years of schooling in classes with the same curriculum (skills-based or whole language), and it provides a basis for comparison of literacy learning across these years. Thus, this study extends knowledge gained from in-depth classroom studies. It provides a comprehensive account of the learner's perspective, documents and compares learner hypotheses across
skills-based and whole language curricula, and draws conclusions about inner-city children's success and failure in learning to read and write in these contrasting settings. The focus is on the consequences of each curriculum as seen from the perspective of the children and on the similarities and differences in children's experiences across these two instructional environments.

Method

Sites

The cross-study comparison involved eight classrooms in two midwest cities. The schools were matched across studies using three socioeconomic indicators. Each school contained a majority of children from urban families with low income levels, most families received public assistance, and the schools' mobility rates were high. Of the three schools involved in the skills-based study (Dahl, Purcell-Gates, & McIntyre, 1989) only two could be matched with comparable whole language sites. Thus, the comparison did not include one skills-based site included in the report of the original study (Purcell-Gates & Dahl, 1991). The elementary school populations in the cross-study comparison were representative of the racial and cultural mix typical of urban low-income populations in the midwest, that is, they included
African American and white Appalachian students. At both the kindergarten and first-grade levels there were two skills-based classrooms and two whole language classrooms.

A critical aspect of the cross-study comparison was whether the skills-based and whole language classrooms selected for the study were reasonable exemplars. Three indicators were used to validate the classroom sites: teacher interviews, classroom observations, and teacher self-report data using the Theoretical Orientations to Reading Profile (DeFord, 1985). Within each study the specific classroom instructional programs were described in terms of their materials, activities, teaching routines, and learner roles.

Skills-based instruction. The skills-based kindergartens included traditional reading readiness programs with extensive emphasis on letter/sound relations; the first-grade programs used a newly adopted traditional basal program with ancillary workbooks and dittos provided by the central administration. First grade teachers carried out instruction in small-group sessions, while the remaining students completed seatwork assignments. Learners copied and filled in missing words for sentences written on the chalkboard, and they
occasionally wrote in journals and writing workbooks. In first grade, children took part in whole-group choral reading and skill recitation lessons with the teacher. They also participated in small-group round robin reading on a daily basis and had the opportunity to select trade books from a small classroom selection when their work was complete. Teachers followed the skill sequence in the basal program and met deadlines for unit completion established by the district. Storybook reading by the teachers was separate from reading instruction and was often followed by discussion primarily aimed at recall of specific story events or characters.

Whole language instruction. The whole language classrooms utilized extended periods of self-selected independent reading and writing, and teachers worked with individual learners or small groups. The reading materials included a wide variety of children's literature and extensive classroom libraries. Instruction in first grade was carried out with whole-group sessions using extended storybook reading and included teacher demonstrations of reading strategies and skills. The writing program embraced writing workshop routines and used children's literature to suggest story themes and evoke topics. Teachers demonstrated and discussed composing processes and
conducted conferences about writing skills with children. Learners engaged in daily writing about self-selected topics and also wrote in journals and shared their writing in whole-class sessions. Most first graders wrote stories that were published within the classroom. Student-authored books and whole-class collaborations were part of the classroom reading materials. Writing and reading share sessions with the whole class were included in the daily schedule.

**Informants**

In each study a gender-balanced sample of 12 learners in each school site was randomly selected from the classroom pool of kindergarten children who qualified for the federally funded free or reduced lunch program. Since there were two skills-based sites and two whole language sites, this pool provided 24 learners from each study. These 48 children were assessed initially for their knowledge of written language. From this initial sample of learners, the focal learners for each site were randomly selected. Since mobility rates for the schools were relatively high, the initial sample served as a reserve of learners that could be substituted if focal learners moved away early in the study.

Across both studies the focal learners represented similar numbers of urban children who were African
American or white Appalachian. Of the 8 focal learners in the skills-based study, 4 were African American children and 3 were white Appalachian. One white Appalachian learner moved away mid-study. Mobility rates were projected to be particularly high for the whole language study, thus 6 focal learners were selected in each of the two sites. There were 6 African American children and 6 white Appalachian children. All of these focal learners remained to the end of first grade.

Procedures

The process for conducting this investigation involved first executing each study separately and then carrying out the cross-curricular comparison. Step one focused on students' sense-making or interpretations within each curriculum and documented their opportunities and processes of learning. Step Two involved data analysis procedures for the cross-case comparison. This comparative analysis entailed tracing the focal learners through their actions and activities over time in order to examine what students learned and how instructional opportunities and patterns influenced this learning. Procedures for this comparative analysis are described in the data analysis section.

Qualitative and quantitative data collection in Step One were implemented in similar ways in each
investigation to ensure comparability. In each study, one researcher was assigned to each school and engaged in data collection for the 2 year period. The initial task was to gain familiarity with students and classroom routines and then begin initial assessment of written language knowledge for the full sample of eligible learners. After the assessment was complete, the focal learners were closely observed across the 2 year period and, along with the children in the initial sample, assessed for written language knowledge at the end of first grade. Thus, the weekly observation of focal learners was bounded by pre- and posttests administered at the beginning and end of the study.

Qualitative procedures for documenting learner activity. In each study the researchers generated field notes in twice-weekly classroom visits across the span of 2 years. One focal learner was followed closely in each observation. That learner wore a remote microphone interfaced with an audiotape recorder so that spontaneous utterances could be captured as the 2 hour observation period progressed. Particular attention was paid to learner statements and actions that indicated evolving hypotheses about reading and writing. The emphasis within these research efforts was documentation of the learner's experience as it could be substantiated in talk, reading/writing behaviors,
and overt actions. The researchers shadowed focal learners and, where appropriate, probed by asking routine questions such as "What are you doing now?" or, "Tell me about that." The researcher also kept a record of instruction, learner behaviors, and the contexts in which each event occurred. Original field notes were elaborated and typed along with partial transcripts produced from audiotape recordings. Thus, the outcome of each observation was an extended set of field notes in which transcripts of learner talk, oral reading samples, and learner actions were integrated. Copies of all learner papers (writing samples, ditto sheets) were also included. These elaborated accounts and artifacts were subsequently coded by the research team for learner behaviors and strategies, then analyzed for sense-making patterns.

In both studies, the researchers functioned as participant observers but kept to the observer end of the continuum as nearly as possible, rather than intervening in learning events. The point of these observations was to determine "what happens" without greatly altering the classroom settings or taking a teaching role during instructional events.

**Quantitative assessment of written language knowledge.** In each curriculum, learners from the sample of eligible low-SES children (24 in each study)
completed an array of six tasks assessing various aspects of written language knowledge. These tasks were administered at the beginning of kindergarten and the end of first grade. Both normed measures and measures unique to this study were used. Our underlying notion was that written language exists as a whole and is composed of various domains that may be examined at different levels. The domains selected were identified as ones related to success in learning to read and write in school (Dahl, Purcell-Gates, & McIntyre, 1989); they formed a picture of each learner's schemata about written language. These assessments included measures of intentionality, alphabetic principle, story structure, concepts of print, written narrative register, and concepts of writing. Table 1 provides a description of each task and describes procedures for task administration.

The six tasks were administered in three sessions spaced over a 3 week period. The intentionality task was first for all learners, and subsequent task order was counterbalanced across learners.

Data analysis

A variety of data analysis procedures were
utilized in the two ethnographies and the cross-curricular comparison. Table 2 presents an overview of the two-step process and outlines both qualitative and quantitative data analysis procedures for each major task.

As shown in the table, Step One focused on both qualitative and quantitative procedures to determine learner interpretations of reading and writing. Step Two procedures focused on comparisons of data by tracing a group of students through a series of comparable events in the skills-based and whole language settings (Griffin, Cole, & Newman, 1982). In order to understand how children's sense-making might differ by instructional contexts it was necessary to examine the knowledge acquired within each approach. The similarities and differences in measures of written language knowledge for learners in the two curricula were analyzed. Further comparisons were made of learners' reading processes and writing experiences. In these analyses teachers and their actions were not under investigation. Rather, the focus was on comparing children's interpretations of reading and writing as they evolved in the skills-based and whole
Pattern generation across qualitative sources. In each study, coding systems were established that captured categories emerging from fieldnote data. These codes represented both learner behaviors and the context in which they occurred. Coded data were then aggregated to determine patterns of learner behavior and evolving learner hypotheses about reading and writing within each study. Data narratives written for each focal learner further documented learner hypotheses, and grids which summarized learner sense-making patterns were generated to facilitate comparison across learners. The Appendix displays a sample grid prepared for a focal learner in first grade.

When comparisons were made across curricular settings, the grids for each focal learner from each of the sites for each half year were aligned and successive reviews were made for patterns of behavior across several learners. Specific tracer units were used for comparison: talk and action during reading and writing, interactions during instruction, and patterns of activity during independent work. Researchers' hypotheses about similarities and differences across learners in skills-based and whole language classrooms were written by each member of the research team. Subsequently, the researchers read and reread all of
the team members' hypotheses and generated a list of tentative findings for the cross-study comparison. The team reviewed substantiating data in field notes for disputed areas and compiled further documentation when clarification was needed. The tentative findings representing similarities and differences in children's reading and writing patterns were also critiqued by outside consultants in a 2 day project review. Attention was paid in this audit to the soundness of research claims and protection against bias.

Analysis of Written Language Knowledge Assessments. Scoring procedures for the six written language tasks were drawn from the body of research supporting each task and from the range of children's responses within this study. Table 3 summarizes the scoring procedures and indicates the specific point levels within each task.

As indicated in Table 3, differential weightings were assigned to some items within specific tasks.

In the intentionality task, the salient dimension was the extent of children's understanding of print as meaningful and functional (Harste, Burke, & Woodward, 1983). Thus, the scoring range represented how close
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each learner came to stating that written language carries meaning. The scale was developed from children's responses in this study as they were questioned about a sentence printed on a piece of paper.

In the story structure task, weighted scores were assigned for various components of the macrostructure of story according to their relative significance among specific story elements (Stein, 1979, 1982; Stein & Glenn, 1975, 1979; Whaley, 1981). Setting (character, place, time) and reaction (the response of the character to the problem) were assigned 2 points and beginning, attempt, outcome, and ending were each assigned 1.

The alphabetic principle and concepts of writing scoring represented increments of knowledge and sophistication indicated in children's responses. On the basis of current research, conventional spellings demonstrating visual, phonetic, and nasal sound strategies were scored higher on the scale than use of one letter to represent a word (Gentry, 1982, 1987; Read, 1971). Stories or groups of related sentences were scored higher on the scale than single words or phrases (Clay, 1975, Dyson, 1991; Harste, Burke, & Woodward, 1983; Sulzby, 1992).

Two tasks, written narrative register and Concepts
of Print, were scored according to their prescribed procedures (Clay, 1979; Purcell-Gates, 1988).

Once scoring was complete for all tasks, pre and posttest results for each study were analyzed for within-group and between-group findings. While the number of students tested in each curriculum was the same at the beginning of kindergarten, patterns of student mobility within these inner-city sites reduced the numbers of students tested at the end of first grade. In the skills-based curriculum the initial sample of 24 changed to 15, and in the whole language sample the change was from 24 to 21.

The statistical procedure for cross-curricular comparison was a two-factor hierarchical arrangement augmented by a within-group variable. This one-between/ one-within-groups design with provision for unequal Ns (Kenredy & Bush, 1985, pp.521-531) used a repeated measures analysis. The between groups variable was the skills-based or whole language treatment, and the within-groups variable was the array of six pre/post tests (intentionality, story structure, alphabetic principle, concepts of print, written narrative register, and concepts of writing). For each measure, a group (skills-based vs. whole language) x time (pretest, posttest) mixed model analysis of variance (ANOVA) with repeated measures was computed.
using a $p < .05$ alpha level. Subjects with missing data (due to task refusal) were eliminated from that specific dependent variable only.

This design was chosen because it provided for two specific characteristics of the cross-curricular comparison. First, there was no random assignment of learners to treatments; instead, learners came from intact skills-based or whole language classrooms. Second, teachers differed in spite of careful selection procedures. While teachers were chosen as excellent exemplars of their particular curriculum and had comparable time periods in which to carry out their instruction, there was some variation across teachers. The design we used was appropriate for intact classrooms when they comprised levels of the nested variable (Kennedy & Bush, 1985, p. 522), and it made provision for teacher variation by nesting teachers within the treatment variable.

Analysis of Reading Processes and Writing Events. As part of the cross-curricular comparison, analyses were conducted to examine and compare reading processes and writing events across studies. After both studies were concluded, a subsample of six first-grade focal learners, three skills-based and three whole language, were selected for a direct comparison of actions during the reading process. These children represented a
range of reading experience and ability. The group included a proficient reader, an average reader, and a less-experienced reader from the skills-based and whole language classrooms. Criteria for learner selection were based on triangulated data from field notes, miscue analysis of actual reading samples, and teacher judgment. The sampling of learner reading behaviors was carried out with reading samples from the mid-point of first grade to the end of that year. The classrooms from which these six children were selected included opportunities both to read self-selected trade books and to participate in small-group reading lessons with the teacher. Thus, two contexts, independent reading of self-selected trade books and teacher-directed reading of texts selected by the teacher, were compared across skills-based and whole language first grades. Analysis of reading processes entailed identifying patterns from miscue and strategy data in reading samples across contexts and comparing these patterns across studies by levels of proficiency.

Comparative analysis of writing events which focal learners experienced was also conducted at the conclusion of both studies. The kindergarten and first-grade writing artifacts from November and February, time samples that captured representative periods of instruction and learner activity, were
reviewed. The purpose was to describe the writing tasks and generally the kind of writing that focal learners produced during these periods. Field note descriptions of learner behaviors during writing events also were collected for each of the focal learners during these periods. Analysis of writing events entailed tabulating types of writing artifacts for focal learners within the sampled time periods and determining patterns in learner actions and responses to writing activities.

Results

The findings from this cross-curricular comparison spanned three general areas: patterns of learner sense-making, written language knowledge measures, and contrasts among reading processes and writing events. Qualitative findings: Patterns of learner sense-making

The qualitative findings focused on interpretations that learners made of their instructional experiences. In the skills-based and whole language investigations, patterns of behavior were taken as indicators of learner hypotheses about reading and writing. Thus, common patterns across the data grids of the majority of focal learners were taken as learner interpretations of a particular curriculum. Comparison across the two studies revealed five areas in which there were prominent patterns.
Pattern 1: Interest in accuracy. In both studies most focal learners were concerned about accuracy. Comparisons of children's talk and actions across the two groups revealed an interest in "getting it right." In kindergarten, children erased repeatedly when learning to form letters and spell words. They asked each other about letter forms, erased, worked on writing that did not measure up to their standards, and tried again. In first grade they tried to accurately map letters and speech sounds and searched for correctly spelled words by looking through books or using available environmental print. These accuracy-focused behaviors sometimes occurred in whole language groups in spite of the teacher's advice to "get your ideas down," or the direction to spell words as they sounded. In both studies these behaviors were evident in learners with various levels of expertise in reading and writing. It appeared that learners began school with some focus on accuracy and sustained that interest in both curricula.

The concern of focal learners in both studies with accuracy was of particular interest because these two instructional settings differed greatly in their demand for production of correct written language responses. One of the main tenets of the whole language philosophy is acceptance of errors as potentially productive in
the learning process. In contrast, the skills-based curriculum is aimed at mastery of specific skills or subskills through practice, and correct responses were highly valued in the skills-based curriculum.

**Pattern 2: Phonics growth.** While a general progression toward understanding of letter/sound relations occurred among children in both studies, cross-curricular analysis of reading and writing behaviors for January, February, and March of first grade indicated differing strategies for using letter/sound knowledge. Table 4 presents the range of phonics strategies in reading and writing that were recorded in field notes about focal learners during these months. Examples are provided in parentheses to clarify specific strategies. Use of specific strategies is indicated with an x under each focal learner's number. As would be expected, some learners used more than one strategy during this period.

Insert Table #4 about here

The patterns of strategy use in phonics indicate some areas of similarity. During this period both skills-based and whole language learners used strategies that showed they were gaining awareness of phonics and experimenting with letter/sound relations.
The differences were evident in the cluster of whole language learners (8 of the 12 focal learners) using strategies that demonstrated application of their letter/sound knowledge. One skills-based focal learner demonstrated application of letter/sound relations through her conventional reading and use of transitional spellings.

These differences in application of phonics knowledge seemed to reflect the writing experiences in each curriculum and the contexts for phonics practice. Children in whole language classrooms experimented with letter/sound relations during daily writing experiences. These writing periods included individual teacher conferences and frequent peer interactions where coaching on letter/sound relations took place. There also were teacher demonstrations of writing processes in which letter/sound mapping was explained (Freppon & Dahl, 1991).

The letter/sound practice in skills-based classrooms was conducted for the most part as seatwork. There were teacher demonstrations of sounding out with the whole group but rarely were these episodes connected to the reading or writing of connected text. Instead, they were part of separate skill instruction. Learners dependent on the curriculum and learners who were inclined to be more passive approached phonics
skill lessons as part of their daily paper work. Their perspective appeared to be that it needed to be completed to please the teacher. Often these children did not put their phonics skills to use when reading.

**Pattern 3: Response to literature.** Learners in both studies demonstrated enjoyment of literature. Almost all focal learners were attentive during storytime and listened with rapt attention as stories were read. Storybooks clearly were a source of pleasure and interest within each curriculum.

The cross-study analysis of children's responses to literature, however, revealed considerable differences in hypotheses children held about trade books. These differences were related to two areas: (a) the nature and amount of experience that children had with trade books, and (b) the insights that children demonstrated about books.

The role that children's literature played in the skills-based sites was relatively small. Learners in these classrooms listened to storybooks read by their teacher and occasionally explored some trade books after completing their work. For the most part, basal readers and skill worksheets served as the primary reading materials in these classrooms. Even when trade books were available, focal learners tended to stay with their basal materials.
The participation structures during storybook reading were restricted in skills-based classrooms. Teachers preferred that children listen to stories quietly and save their comments until the story's end. Teachers asked children comprehension questions about each story, and children commented about favorite events during story discussions.

A representative storybook lesson occurred when the teacher read *What Mary Jo Shared* (Udry, 1966) while the children listened. This story involved a little girl's quest for something unique to take to school to share. As the story unfolded the little girl considered various animals, such as grasshoppers and even an imaginary pet elephant. At the end of the story the teacher asked if anyone could really have an elephant for a pet. There were several opinions, but Eric was adamant and began vigorously shaking his head yes. He announced, "I keep it outside." The teacher asked, "What would you feed it?" and Eric turned to the page in the book that told what elephants ate. This exchange formed the pattern for successive questions about what children would do and what the book said. Learners, including Eric, were adept at finding information that the book offered and adding their opinions.

The role that children's literature played in the
whole language classrooms was somewhat different. Trade books were a central vehicle for literacy instruction. Each day children listened and interacted as several books were read by their teacher. Further, learner-chosen trade books were read by children independently each day in first grade, and many books were incorporated into daily writing experiences. Isaac, for example, was a learner who used familiar books to prompt writing topics. He wrote personal versions of many storybooks, changing the plot or adding a personal twist to the language.

Participation structures during storybook reading with the teacher varied across the two whole language sites, but generally learners in these classrooms were encouraged to participate actively during storybook sessions. Children made predictions, commented on illustrations, asked questions about the story, stated opinions, responded to wordings and letter/sound relations, and acted out story events.

A typical storybook session occurred, for example, when the teacher read a predictable book entitled Oh No (Faulkner, 1991). The plot involved a series of mishaps, each resulting in a spot appearing somewhere. The recurring phrase Oh no was part of each episode. Children listened and looked at the words and pictures. Midway through the story their comments were
particularly revealing.

Teacher: [reading and pointing to the words] There's a spot on my skirt. There's a spot on my pants, cause I fell in the dirt.

Chris: It looks like mud.

Teacher: Would it make sense if it says mud?

Children: Yes.

Isaac: It's D ... dirt.

Terry: If you don't know what the words say, you can look at the pictures and see if the pictures tell.

Teacher: Look at the words and the pictures. [nods] That's good. Here's another one.

There's a spot on my sweater.

Chris: It doesn't look like a sweater. [pause] It doesn't look like a spot.

Teacher: Does it look like a shirt?

Children: [all at once] Yes. Well maybe. No.

Teacher: So we have to look at the words to figure it out.

Kira: But sweater and shirt start with the same.

Teacher: Same letter.

Cindy: They should put tee shirt because that's what it looks like.

Teacher: So you don't think this makes sense. But it says--

Terry: But down there they put sweater.
Teacher: Shirt starts with S H, shhhhh.
Maury: Just like The Shrinking Shirt.
Willie: And Jump Frog Jump [when the protagonist says "Shh"].
Teacher: There's a spot on my tie. There's a spot on my chin from this blueberry pie. Oh no!
Willie: On that page it's just one word and on the other one it tells where it came from.
Teacher: That's right. It doesn't tell where the spot on the tie came from.
LaWanda: It could say, "From the hot dog he ate."
Teacher: [doubling back] There's a spot on my chin from this blueberry pie.
Kira: Every time I see that it makes me want to eat.
Teacher: There's a spot on my shorts [children all reading along]. There's a spot on my knee.
Doug: That don't look like knee.
Kira: It sounds like a E for knee.
Teacher: There are E's in it.
Sandy: Two E's.
Teacher: There's a spot on my dress everybody can see. Oh no!
Isaac: Look, it's kind of a pattern with the pattern [Oh no] and the letters too. First it says S then D then S.
Shemeka: [exasperated] It would make sense if they said
where the spot came from and then on the next page
tell where it came, before -- and then said "Oh
no."
Teacher: So you want "Oh no" on every page?
[Shemeka nods in agreement.]
Teacher: There's a spot on my spoon --
Terry: Probably from not washing good.
Charlie: From somebody eating with it.
Teacher: There's a spot on my bowl. There's a spot on
my cup and it looks like a hole. Oh no.
Sara: [commenting about the illustration] You know what
they should do; they should make water coming out.
Isaac: It looks like a clock. Turn it [the page] back.
[The teacher turns back so the illustration can be
scrutinized, then resumes reading.]
Teacher: There's a spot on my hand. There's a spot on
my face...
Chris: Oh! Oh! I know, I know.
Willie: I know what that's gonna be.
Maury: She's got chicken pops.
Teacher: [reviewing] There's a spot on my face.
Tara: 'Oh no' on the next page.
Willie: That's gonna be spots everywhere 'cause she got
the spots off her plate.
Isaac: Turn it back to the spron. It looks like a
spot.
Maury: I got the chicken pops right now!

In this segment of storybook interaction, it was clear that learners were engaged in figuring out how the story worked. They attended to pattern and thought about story language, sound/symbol relations, and illustrations. They critiqued the story and related their own experiences to its events. The teacher stopped the story as requested, supported children's efforts to clarify, and listened to volunteered ideas.

When the two representative vignettes about storybook read-alouds were compared, differences in learner opportunities were evident. In the skills-based example, What Mary Jo Shared, the learners' responses were elicited at the end of the story only and guided by the teacher's questions. Children participated by using story information to support their opinions. In the whole language example, the discussion took place throughout the story reading event. It was based on learner observations and included teacher responses and questions. The opportunity to construct meaning was present throughout the whole language read-aloud lesson.

Interacting with storybooks in these ways clearly contributed to what these children knew about stories and how they responded to trade books. Data analyses revealed that children in whole language classrooms
demonstrated a range of insights from their experiences. These patterns were not evident among learners in skills-based classrooms. Three categories of interpretation were evident: learning storybook language, gathering intertextual knowledge, and adopting a critical stance.

**Learning storybook language** was evident in children's writing. Their written stories included dedication pages, illustrations, dots to indicate continuing events, and formulaic endings. Patterns of action indicated children were learning about written language from reading and listening to trade books. The following story written in October of first grade by Isaac demonstrated this influence.

**The Scary Hairy Spider**

*When me and Ricky was playing outside, we saw a spider and Ricky picked up the spider.*

*I said, "Ooo gross!"

*And I said, "Ricky put that spider down or you will get bit and ... if you get bit, don't come to me!"

*And... if you come I will not help you.

*And if you ask me twice, I still won't help you.*

**The End**

The story was written in book form, with each line on a separate page. It included illustrations and a
title page and was typical of many stories written about daily experiences but shaped by structures and language patterns found in books.

Gathering intertextual knowledge was demonstrated by whole language children in first grade as they spontaneously talked about characters, events, and plot arrangements across stories. Children appeared to be building a story world that included a repertoire of story elements. The following comments were characteristic of this learner pattern:

"Oh that reminds me of the butcher, the baker, and the candlestick maker."

"You have to look for the cat. It's like Each Peach Pear Plum [Ahlberg & Ahlberg, 1985]."

"That looks like a Eric Carle book."

Learners appeared to have a memory for books and used their intertextual knowledge as they participated in story events. In contrast, no pattern of intertextual insights was present in the skills-based study. Learners' attention was directed toward other matters when stories were read by the teacher and their spontaneous utterances did not include these connections.

Adopting a critical stance was shown as children in whole language classrooms made suggestions about how professional authors could improve their stories.
Children criticized story endings and talked about what would improve the illustrations. In skills-based classrooms children talked about story events and answered comprehension questions. There were few critical comments about stories.

**Pattern 4: Coping strategies for learners experiencing difficulty.** In both skills-based and whole language classrooms the least proficient readers and writers developed various ways of dealing with teacher expectations and instructional demands. While their patterns of behavior and strategies for coping were similar in some ways for children in the two studies, the cross-study contrasts were significant.

The similarities in behavior patterns were most evident in teacher/student conferences at the individual level. When skills-based teachers gave one-on-one help to learners experiencing difficulty, the children could focus on the lesson and increase their learning efforts. Outcomes of one-on-one interactions in skills-based classrooms often resulted in children getting the correct answer or showing they understood. Similarly, in whole language classrooms, one-on-one teacher/student interactions were productive for learners experiencing difficulty. In this context, learners responded positively and increased their efforts to accomplish the expected task.
The greatest difference in coping behaviors across studies occurred when these same learners worked on their own. Interestingly, passivity appeared to be the most pervasive coping strategy for learners experiencing difficulty in skills-based classrooms. Their strategies also included "bluffing" their way through reading lessons by reading paralinguistically and copying from others without efforts to produce meaning on their own. Field observations showed that learners sat and stared for periods of time, marked randomly on worksheets just to finish them, and waited for or asked for help. Their behaviors indicated they weren't making sense of what they were doing. One learner acted out somewhat aggressively, but in general the coping behaviors of children experiencing difficulty in the skills-based study seemed aimed at just getting through the assigned reading or writing activity. Rather than "taking on the task" of reading, they tended to avoid it and found ways to get by in the classroom (Purcell-Gates & Dahl, 1991).

One exception to this pattern was a skills-based learner who coped by creating opportunities for individual instruction. Creating a "school for one" (Dahl, Purcell-Gates, & McIntyre, 1989) entailed one of two strategies, either acting out sufficiently to be required to stay after school or interrupting small-
group instruction by holding up the workbook, looking baffled, and asking, "What I pose a do?" in a loud voice. Both strategies produced private sessions with the teacher in which personal instruction was given and the learner's questions answered.

The coping behaviors of comparable children from whole language classrooms were shaped by the social contexts in their classrooms. Learners often interacted with their peers when they didn't know what to do. Within the periods of extended independent reading or writing, they tended to "tag along" with other learners. In doing so they seemed to establish their own support systems. For example, in group reading situations they actively listened to other children and picked up phrases and sentences, saying them along with others. When a struggling learner copied from children's papers during writing, there also was an attempt to write independently by simply adding letters, drawing, or talking about words or letters that could be added. These peer interactions indicated some attempt to carry on the activity meaningfully.

In writing, the least proficient learners in the whole language first grades developed some avoidance behaviors. These children sometimes moved around the room and interacted socially with peers. They also set
up elaborate "clerical" duties such as getting word cards for others, becoming the illustrator in collaborative book writing, sharpening pencils, setting up supplies (paper, pencils, and crayons), and helping or organizing other helpers in writing tasks. They stalled and avoided the act of writing, often altering their behavior only in one-on-one sessions with the teacher.

**Pattern 5: Sense of self as reader/writer and persistence.** Among the patterns reflecting the learners' interpretations, two trends were particularly prominent in whole language classrooms. Whole language learners demonstrated in nearly every classroom observation a perception of themselves as readers and writers. Further, these learners sustained their attention in literacy episodes and persisted when engaged in reading/writing tasks.

Focal learners in whole language classrooms, particularly in the first-grade year, frequently made impromptu statements about themselves as readers and writers. Rather than focusing primarily on the acts of reading and writing, these children were interested in themselves and their progress. They frequently talked about what they knew how to do, what they were going to do next, and what they saw as a challenge or difficult task. These statements occurred spontaneously within
the context of independent reading or writing time. Many remarks about self were made to no one in particular and others were part of the talk among learners as children engaged in reading and writing. The following statements are representative:

"I can read the whole book."

"I got that book at home, I already know it."

"Me and him wrote four books."

"I can read,... just not out loud."

"I can spell that without even looking."

"When I was in kindergarten, I couldn't write or spell a thing."

"I'm a gonna write, I'm a gonna draw, I'm a gonna do one more page."

"I'll read it all by myself, I don't need any help."

Within the whole language classrooms this pattern was evident in children who read proficiently as well as in those who struggled with reading and writing, though less proficient readers and writers made more statements about what they were "gonna do" than about what they knew.

Analysis of field notes in whole language classrooms indicated that these statements were often connected with a second pattern of behavior, persistence. Consistently, whole language learners
moved from reading one book to reading another, sustaining the act of reading across the independent reading period. Learners also read books collaboratively, talking about the pictures, commenting about the story, and reading in turns. These learners appeared to be engrossed in their reading and usually sustained their attention and effort. Sometimes learners kept reading during teachers' signals to put books away and a few continued reading as the rest of the class began a new activity or lined up for lunch.

The pattern of persistence was evident in writing as some learners worked on the same story day after day or initiated an elaborate writing project and worked on it continuously with the support of friends throughout a given writing period. For example, Eustice, one of the least proficient writers in first grade, began a six-part book about his family. Each separate section addressed a different family member and the project, spanning three consecutive writing periods with extensive teacher support, was characterized by Eustice excitedly arranging the book's sections in piles on his writing desk, wrestling with what to write about each person, and asking excitedly, "Can I publish it?" over and over.

The skills-based classrooms also contained these patterns of sense of self and persistence, but the
patterns were restricted to the most proficient readers and writers. Maya, for example, commented "I'm writing without even looking at the board." The pattern was evident in writing events also. For example, Audrey, being assigned to copy a group of sentences from the board and add an illustration, generated an original story. As she added speech bubbles for the characters she elaborated, "There's a red light and there's a stop sign and there's how fast you should be going. And the rain started raining and it come down splash and she said, 'Ha Jan and Pam.'" Audrey persisted with this story well past the lesson. The remote mike picked up Audrey talking through the story again later in the day, this time discussing Jan and Pam with another child (Dahl, Freppon, & McIntyre, 1993).

The frequency of these remarks and episodes differed across studies. Even for the most proficient readers and writers there were only a few scattered utterances captured in the first grade year in skills-based sites, whereas such utterances were frequent in whole language classrooms, occurring in nearly every classroom visit in the first-grade year. In the skills-based sites the less proficient readers and writers sometimes made spontaneous statements during their work, but the statements were focused on task rather than self.
"Dag, I wrote this on the wrong one."

"I [know] what I pose to do, but what I pose to
do first?"

"I'm pasting my fox next to the b, where are you
pasting yours?"

(Purcell-Gates & Dahl, 1991)

Learners in skills-based classrooms, for the most
part, were engaged in teacher-directed or teacher-
assigned tasks and tended to complete them diligently.
Their independent reading tended to be brief, and the
prevailing pattern was to abandon books after reading a
page or two. The most proficient learners, however,
did reread basal stories on their own and tended to
sustain that activity.

Quantitative findings: Written language knowledge
Assessments

The pretest results in both studies showed that
these randomly selected children held a very restricted
view of written language (Dahl & Freppon, 1991;
Purcell-Gates, 1989). When the skills-based pretest
results were compared to those of the whole language
study, it was clear that children in the two whole
language kindergartens scored slightly lower on every
measure but one. Learners in both studies tended to
view written language as something "for school" and
were generally unfamiliar with print as a way to convey
meaning. Learner grasp of print conventions, the alphabetic principle, and concepts of writing indicated little familiarity with written language. Pretest data on story structure and written register showed that learners were unfamiliar with the language of storybooks and the macrostructure of written stories. At the end of the first-grade year learners in both investigations demonstrated considerable improvement.

Of particular interest in this cross-curricular comparison was whether there were significant differences in the quantitative measures when the skills-based and whole language posttest data were compared. A 2 (Group) x 2 (Time) mixed measures ANOVA with repeated measures was carried out on all six of the written language measures. Tables 5 and 6 present these data.

A significant group x time interaction was obtained for written register only \[F(1,2)=27.95, p<.05\] with the whole language group scoring higher on the posttest than the skills-based group. The effect size was .07 (Hedges, 1982). Significance was not obtained on any of the other five outcome measures.
Contrasts in reading processes and writing events across studies

The analysis of reading processes involved a proficient reader, an average reader, and a less experienced reader from each curriculum. Each was selected as representative of the given proficiency level within the curriculum. Three findings were evident from the comparison of reading samples for the selected learners at each level of proficiency.

First, the reading behaviors of the selected skills-based learners differed across teacher-directed and independent reading contexts. The skills-based learners used strategies independently that they did not use with the teacher. A finer grained analysis of these patterns is included in McIntyre (1992). In contrast, the selected whole language learners read in similar ways in both contexts.

A second finding was that the whole language learners at each proficiency level demonstrated greater breadth strategically in both teacher-directed and independent contexts. Generally, the strategies of the skills-based learners were to identify known sight words, try to use letter/sound relations, and wait to be told an unknown word. The whole language learners generally used picture clues, skipped unknown words,
reread and self-corrected, used letter/sound relations, asked for help, and commented about the story.

Third, the levels of engagement, as shown by patterns of learner persistence, effort, and interest in reading, were different across studies among learners who were average or less experienced readers. In the skills-based study, these two clusters of children did not demonstrate involvement by staying with reading tasks independently. Their whole language counterparts, in contrast, were persistent in their reading and highly active as they read independently.

Descriptions from these comparisons at each proficiency level are presented in the sections that follow. The contrasts include miscue data and evidence of reading strategies from reading samples during the mid and latter part of first grade as documented in teacher-directed and independent contexts.

Proficient readers: Audrey and Charlie. Audrey was the most proficient reader in her skills-based (SB) classroom. She read accurately and fluently in a word-calling manner in teacher-directed contexts, often waiting to be told an unknown word and sometimes sounding words out. Audrey's independent reading involved more strategies. Sometimes she read parts of a story conventionally, then switched to a focus on letter/sound cues. She seemed to experiment or "play
with the text" when reading alone. Consistently, she was actively engaged in reading and performed as a persistent reader in both teacher-directed and independent contexts.

Charlie, in a whole language (WL) classroom, alternated between oral and silent reading. His oral reading substitutions in both teacher-directed and independent contexts indicated that he used all three cuing systems as well as picture clues. Charlie commented while reading and discussed the story line with himself. He worked on unknown words and said occasionally, "I don't know this one." He used letter/sound cues and rereading to figure out words.

Average readers: Mary Jane and Jason. In teacher-directed lessons Mary Jane (SB) simply stopped reading when she came to an unknown word. She read only the words she knew and relied on the teacher to supply unknown words. Teacher encouragement led to the inclusion of some letter/sound cues, though these were rarely employed in independent reading. Working alone, Mary Jane did not tend to remain engaged in reading.

Jason (WL) used a wide range of strategies such as skipping, rereading, and picture clues across contexts. Miscue data indicated that he used story meaning and sentence structure to identify unfamiliar words and that sometimes his substitutions showed an over-
reliance on phonics. Jason stayed with a story when it was difficult and sometimes commented about what he was reading.

**Less experienced readers: Rodney and Ann.** Rodney (SB) demonstrated a limited range of skills when reading with the teacher. He guessed at words using his repertoire of sight words (was? it? is?) and used picture clues, though often without success. His independent reading often consisted of talking about the story and using picture prompts. By the end of first grade his independent reading had declined and Rodney tended to avoid reading in any context.

Ann (WL) used several strategies to get unknown words across contexts: rereading, letter/sound mapping, and using picture cues. Miscue analysis indicated an over/reliance on phonics using the beginning sound only. Ann often talked about the story, and her independent reading behaviors indicated an active and engaged stance.

**Comparison of writing tasks across studies**

Analysis of writing tasks and products indicated that focal learners in skills-based classrooms, for the most part, produced written answers on assigned worksheets as their writing activity in kindergarten. Of these, most tasks involved circling letters that corresponded to beginning sounds of pictured items.
(e.g. t for tub) and identifying whole words that corresponded to pictures or color names.

In the whole language kindergartens, writing involved exploration. Learners produced letter strings, usually with accompanying drawings and sometimes with meaning assigned after the work was complete. Children copied environmental print, often adding illustrations, and some writing artifacts included invented spelling.

The contrasts between curricula were more pronounced in first grade. In skills-based classrooms, writing was primarily for sight word and specific skill practice. Children copied sight words from the board, either lists or sentences, and participated in workbook activities that called for copying the correct word or sentence or circling a sight word and its matching picture. Learners worked on making their writing neat and on spelling each word correctly.

While learners routinely completed this writing as "paper work," there also was some interest in composing. A writing event from the November samples captured this phenomenon. The writing task was to use words written on the board (rowboat, motorboat, and sailboat) to write a sentence in the Think and Write workbook. The workbook page provided places for children to draw and write. The teacher's directions
were, "Write a sentence about a boat. You could name the boat. If you need help spelling, raise your hand."

Jamie, a first grader in the skills-based study, began by drawing. After his rowboat picture was complete, he wrote CAN BOAT on the lines provided under the picture square. Next, he said "Go" and wrote GO. Looking determined, Jamie read his sentence-so-far under his breath, wrote TWO and then reread the sentence again, this time pointing to each word. Continuing the effort, Jamie frowned for a moment, then said "the," and wrote it. He looked at the sentence, sort of scanning it and added an S to the word boat. His text read CAN BOATS GO TWO THE. Jamie then paused thoughtfully and raised his hand to request the word river. The episode ended as Jamie said the word he needed over and over.

Writing in this instance was focused at the sentence level, and the assigned topic was related to a basal story. Jamie was engaged in writing his intended meaning and carefully monitored his work.

A comparable writing event in whole language classrooms occurred in the same time period involving Willie, also a first grader. During the writing workshop period, Willie wrote a spinoff story for the book The Chocolate Cake, which he had read earlier. He copied the title and used the book's format. Looking
at the book, Willie wrote:

DTA SAID M-M-M-M-M. [Dad]
GRONDMA SAID M-M-M-M-M. [Grandma]
MYAAT SAID M-M-M-M-M. [my aunt]
BODY SAID M-M-M-M-M. [baby]

As he slowly said each person's name, Willie looked to the side and listened to the sounds, then he wrote the letters. Next, he copied the repeated phrase from the first page of the book. He arranged one sentence to a page, placing the sentences at the bottom as if illustrations would follow. Willie reread his four pages, then smiled and added the last, WILLIE SAID M-M-M-M.

In this event there was an effort to map letters and sounds and a supporting text to structure the project. There was no revision after rereading.

In general, when writing tasks and products were compared, the differences reflected the function that writing served in each curriculum. In the skills-based classrooms the learners completed teacher-assigned writing tasks designed to provide practice in skills. In the whole language classrooms the writing periods were centered on learner-generated topics and learner exploration of written language. Children often received help from their peers and from the teacher.

The kinds of writing produced differed markedly
across curricula. In first grade the children in whole language classrooms primarily produce work at the sentence, paragraph, and story levels. First graders in skills-based classrooms also produced some stories, but for the most part they worked on completing workbook assignments or on text written by the teacher on the board. Many writing tasks included sentence completion, fill in the blanks, and sentence or sight word copying with choices that learners could make among words.

Comparison of learning opportunities

While the focus in this cross-curricular comparison was on learner interpretations of beginning reading and writing instruction, contrasts in learning opportunities were evident. In the sections on phonics growth, response to literature, and writing tasks, we described learner patterns of behavior which related to each curriculum. In Table 7 we summarize the learning opportunities in these three areas.

Insert Table 7 about here

While we recognize that a comprehensive account of differing learning opportunities across curricula is beyond the scope of this article, some distinctions can be drawn from our field note accounts. The two
vignettes that follow are representative of reading instruction in skills-based and whole language first-grade classrooms and serve to illustrate differences in learning opportunities during teacher-directed lessons.

Reading vignette - Skills-based. In one skills-based classroom the teacher introduced the basal story "The Yellow Monster," which told about a yellow bulldozer that some children had discovered. She talked briefly to the small group about the author, explained what the word author meant, and then read an abstract of the story. She added, "So during the story you should be thinking about .. what IS the monster." The children then began to read the story aloud one-by-one as others followed along, some pointing to the words as they listened. The teacher urged children to focus carefully on words. "Look at the word...what's the word?" she said repeatedly. The children not reading aloud said the word to themselves when the teacher stopped a reader. For example, Shirika read some words incorrectly during her turn. The teacher intervened, "Look at the word, that is not what it says. Put your finger under the sentence it likes to dig. The next word is follow." Shirika repeated follow. During their turns, each of the five children in the group read three or four story sentences. Maya took her turn:
Maya: "Here is the monster," said Nina.
"Don't go too near it."
"Oh, I know what that is," said Linda.
"This monster is big and yellow. It's a helping monster," said Tom.

Teacher: Said who?
Maya: Tim.

Teacher: O.K.
The story continued with the next reader and the next until it ended with teacher talk about reading carefully rather than rushing and saying the wrong word. "When you came across a word that you don't know, I want you to take the time to figure out what it is. Sound out the word or ask someone," she urged. Learners were then instructed to reread the story, practice the words, and think about them on their own.

Reading vignette - Whole language. The whole language teacher and a small group of children looked through their copies of a new paperback, and they talked about what they liked from their initial scanning. They discussed what the story was going to be about after looking at the pictures and noting some of the words. Then one child simply began to read aloud and others joined in. The teacher moved in and out of the children's parallel oral reading (reading so the children's voices predominated). When children
faltered, the teacher asked questions, prompted with the sound that matched the beginning of the word, or asked about the picture. She also asked children to talk about the story, make predictions, and clarify what they thought. The teacher asked, "How do you know?" and "Why do you think that?" as children told their ideas. Midway through the story the teacher asked learners to "Read with my finger" and pointed to one particular sentence, encouraging children to reread it with her. Children read the sentence but stumbled on the word gate. They talked about how they figured out the word (the various cuing systems they used). The teacher asked children to discuss the developing story in light of its beginning and then invited them to finish on their own. She said, "I'll let you find out what other trouble they get into." After children finished reading on their own, some were asked to do rechecks (rereadings) to clear up parts where they had trouble.

Reflection. In these two vignettes the learning opportunities differed markedly. Learners in the skills-based lesson had the opportunity to focus sharply on words, take their reading turn, listen to others, and practice reading the story on their own. Their attention was directed to the point of the lesson and they received consistent coaching from their
teacher as they read. In contrast, the whole language lesson was more diverse. Learners received various kinds of assistance, they were encouraged to use multiple cuing systems, and each reader read nearly all of the story. There was an opportunity to think about how to read and construct a sense of the story.

When data from the table reporting learning opportunities in phonics, response to literature, and writing tasks are considered along with the reading instructional patterns illustrated in the vignettes, several contrasts are evident. The skills-based curriculum placed children, for the most part, in teacher-directed contexts where they engaged in reading or writing practice and interpreted or made sense of concepts from the instructional program. There was a focus on specific skills, and practice opportunities assigned by the teacher. In contrast, the whole language curriculum engaged learners in sustained periods of reading and writing. Planned lessons took place in teacher-directed contexts, there was direct skill instruction focused on strategies, and learner choice was pervasive. Further, individual conferences provided contexts for instruction and support for independent reading and writing efforts.

Conclusions and discussion

This cross-curricular comparison had two goals: It
LEARNER INTERPRETATIONS

sought to capture learners' interpretations of beginning reading and writing instruction across the first 2 years of schooling in skills-based and whole language classrooms, and it structured a comparison across these two contrasting literacy curricula. The point was to make visible the similarities and differences across curricula in the children's interpretations of reading and writing and to extend our understanding of these curricula for inner-city children.

The results presented a somewhat paradoxical picture. On the one hand, some findings, particularly those from quantitative measures, indicated a number of similarities in learning outcomes as measured by the tasks assessing written language knowledge. The cross-curricular comparison also documented that children made progress in both approaches. Given the controversy about direct or indirect instruction, especially for minority children (Delpit, 1986, 1988) and the "great debate" about phonics, these findings were of particular interest.

On the other hand, many of the findings demonstrated that learners made different senses of reading and writing in light of their experiences. The significant difference in written narrative register was taken to reflect curricular differences.
Whole language learners generated significantly more syntactic and lexical features of story language and they experienced extended exposure to and interaction with storybooks. In contrast, skills-based classrooms offered less emphasis on literature experiences.

The findings about letter/sound relations suggested that we have been asking the wrong questions. The important issue was not how children were taught in school-based settings, but rather what sense they could make. Unquestionably, phonics learning varied among focal learners in both studies. The essential difference was in the application learners made of their letter/sound knowledge and whether it was meaningful to them in terms of their understanding of written language knowledge. Children in one-on-one conferences with the teacher in both curricula seemed able to focus on letter/sound relations with teacher support. In independent writing contexts in the whole language classrooms children also learned to "look twice" at letters and sounds and tended to apply letter/sound relations more often during reading and writing episodes.

Finally, the cross-curricular comparison indicated distinctive differences in the affective domain (Turner, 1991). Learners in whole language classrooms expressed extensive interest in themselves as literacy
learners. Moreover, their talk and actions revealed an understanding of their strengths and weaknesses as readers and writers. The linked patterns of sense of self as reader/writer and persistence indicated the establishment of a "disposition for learning" and provided evidence of learner ownership and a positive attitude toward literacy. In the skills-based study these two patterns were evident only among the most proficient readers and writers. This learner pattern was considered important in light of the vexing problem of patterns of failure that often characterize inner-city learners in public schooling.

The paradox of differing findings from qualitative and quantitative data merits some explanation. In this comparison qualitative and quantitative data sources were considered as multiple perspectives revealing various kinds of information. The qualitative data tapped learner utterances and patterns of action over time and thus yielded data that revealed learner interpretations of reading and writing. The quantitative measures, in contrast, served as pre/post samples and indicated students' written language knowledge in specific domains. Because the sampling and focus differed in some areas across qualitative and quantitative data, the respective findings also differed. For example, data
about attitudes toward reading and writing were prominent in the qualitative data but not sampled in the specific quantitative tasks. Similarly, data about accuracy in reading and writing events, responses to literature, and coping strategies of learners were evident in qualitative data, but not assessed in quantitative tasks.

There were three areas where qualitative and quantitative data converged in focus. First, in the area of written narrative register (knowledge of the language of storybooks) the qualitative and quantitative findings were in agreement and favored whole language. Second, in phonics knowledge the qualitative and quantitative findings were at odds. Qualitative data indicated more application of letter/sound knowledge in daily writing events in whole language classrooms, but this difference was not supported in the quantitative alphabetic principle findings. Third, in writing production there was a difference in qualitative and quantitative findings. The former indicated greater sustained writing experiences for whole language learners, yet the quantitative task assessing writing showed no significant difference in the kinds of writing learners produced.

The disagreement in alphabetic principle findings
suggests that, as assessed in these tasks, the two curricula may not differ widely in the phonics knowledge that learners gain. The difference was in what learners in differing curricula did with their phonics knowledge. Finally, in the area of writing production, the differences between qualitative and quantitative findings reflected learner interpretations of the writing task. Whole language learners responded to the writing task as a prompt for knowledge display. They produced lists of words or lists of sentences instead of their usual stories. The testing context and the task prompt appeared to shape learner interpretations about what the task required.

On a more general level, this cross-curricular comparison indicated differences in children's fundamental understandings about what literacy was for. The distinction between literacy skills and literate behaviors is central to understanding the contrasting outcomes documented in this comparison. Literacy skills are the concepts and behaviors that learners use as they read and write. They are elements of proficient reading and writing that are taught and practiced in most school-based settings. Literate behaviors are somewhat broader; they include learners reflecting on their own literate activity and using oral language to interact with written language by
reacting to a story, explaining a piece of writing, or describing a favorite book to another person (Heath & Hoffman, 1986). Literate behaviors also include taking on the tasks of reading and writing, valuing one's own experience and personal language and connecting with written language, and communicating about written language experiences. When learners see their own experience as valid knowledge and use reading and writing for their own purposes, the journey toward literate behaviors is soundly under way.

Children as sense-makers in these two studies seemed to exemplify the distinction between literacy skills and literate behaviors. Some of the children in skills-based classrooms did not weave together the "cloth of literacy" (Purcell-Gates & Dahl, 1991, p. 21) nor move beyond their role as answer-makers. Generally, they participated in reading and writing events, completed their work and learned literacy skills, but did not get involved personally nor see reading and writing as going beyond "something for school." The children in whole language classrooms also learned skills and engaged in literate behaviors. Importantly, some degree of literate behavior was demonstrated by children of all levels of proficiency in these classrooms.

Learners who demonstrated the "disposition for
learning" took on the task of reading and writing for their own purposes. The majority of children in whole language classrooms and the most proficient readers in the skills-based sites demonstrated this pattern of engagement and ownership. Thus, the greatest difference appeared to be not what was being taught, but what children were learning—about themselves, about reading and writing, about school.

Limitations

The comparison of these two studies was restricted to urban, low-SES children learning to read and write in skills-based and whole language kindergarten and first-grade settings. No standardized measure of phonemic awareness was used in the array of quantitative measures that were part of the pre/post comparison. Thus, claims about phonics growth are limited to patterns that were documented in field notes of classroom observations. Comparative studies are generally limited by the extent to which the data being compared are parallel. This current study compared the outcomes of 4 years of research in eight classrooms in two very different instructional settings. Thus, it is important to clarify some potentially troubling issues that arise in any comparative study and particularly in one of this duration and complexity.

The current research project was guided by some
overarching principles. First, children's knowledge construction was identified through patterns of learner talk and action. Researchers focused on the learners' perspectives, and codes and categories emerged from the actual learner behaviors in all eight classrooms. What these learners said and did in consistent ways over time formed the basis of sense-making categories. Second, the instructional contexts of the skills-based and whole language classrooms clearly acted to shape children's behaviors in various ways. Students' talk and actions can only be made manifest within the bounds of behavior considered acceptable in any classroom. The theoretical differences between the skills-based and whole language curricula, subsequent teacher and student reading and writing behaviors, and classroom rules of conduct determined to a large extent the written language interactions that could be observed in these studies. Third, we combined this understanding with careful and rigorous analysis of children's observable actions across both instructional contexts. The reported similarities and differences between skills-based and whole language groups were grounded in what these children, from highly similar low-SES populations and cultural groups, did to make sense of written language in these contrasting curricula.

Implications
The contrasts in learner sense-making across studies reinforced the notion that we must consider the learner's perspective and individual differences in reading and writing development in order to understand children's reading and writing behaviors. Beyond documenting classroom curricula and their consequences, we need to know what children believe, what events and contexts shape their thinking, and how instruction can better fit children's evolving knowledge and skills.

In the final analysis, acquiring the disposition for learning may be the most critical occurrence in the early grades. The inner-city learners in our study have many years of schooling ahead of them. The prognosis for children who are engrossed in books at the first-grade level and who think of themselves as readers and writers and are mindful of their strengths and weaknesses appears hopeful. It suggests at least the possibility that these children may continue to choose to read in the grades ahead and that they might sustain their roles as writers. In contrast, those who in first grade have already disengaged from literacy instruction appear to have begun the pattern of turning away from school (Dahl, 1992). The contrasts in this cross-curricular comparison tell us that learners are making sense of themselves in terms of their experiences in the early grades and that these early
learner perceptions may establish patterns with far-reaching consequences.

**Directions for future research**

Future studies that compare across curricula might focus on some of the issues raised in this investigation. The area of phonemic awareness could be investigated across curricula in terms of instructional interactions and learner interpretations. The contrasting learning opportunities in skills-based and whole language classrooms should be investigated in detail. Finally, cross-curricular comparisons need to extend to the upper grades, where investigations of sustained instruction across 2 or more years in whole language and/or traditional basal programs have rarely been conducted with primary focus on learner interpretations.
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personal literacy. Reading Research Quarterly, 27, 297-333.


Research in Child Development, Denver, CO.


Table 1: Summary of Pre- and Post-Written Language Knowledge Assessments

<table>
<thead>
<tr>
<th>Description of Task</th>
<th>Procedures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentionality: access schema for written language as a system with accessible meaning.</td>
<td>• Present printed sentence and ask child if there is anything on the paper. Probe to capture child’s responses.</td>
</tr>
<tr>
<td>Concepts about print: standardized test (Clay, 1979) taps major book reading and print concepts.</td>
<td>• Follow established procedures using the Stones form.</td>
</tr>
<tr>
<td>Alphabetic principle: access knowledge of letter/sound relations and alphabetic principal.</td>
<td>• Present familiar environmental print in contextualized and decontextualized events.</td>
</tr>
<tr>
<td></td>
<td>• Ask child to write ten dictated spelling words.</td>
</tr>
<tr>
<td></td>
<td>• Ask child to write anything s/he wishes and to tell about the writing.</td>
</tr>
<tr>
<td>Story structure: access schema for the macrostructure of written narratives.</td>
<td>• Read a story to the child. Take a short break to prevent rehearsal effects. Ask child to retell story.</td>
</tr>
<tr>
<td></td>
<td>• Engage the child in puppet play. Prompt the child to “tell me a story” during the course of play.</td>
</tr>
<tr>
<td>Written narrative register: access knowledge of syntactic and lexical features found in storybooks using the difference score between an oral language sample and a written language sample.</td>
<td>• Ask the child to tell all about an event such as a birthday party or family outing.</td>
</tr>
<tr>
<td></td>
<td>• Familiarize the child with a wordless picture book. Ask the child to pretend to read the story to a doll. Encourage the child to make it &quot;sound like a real book story.&quot;</td>
</tr>
<tr>
<td>Concepts of writing: access the child’s concepts about writing as a system using the written artifact generated under the &quot;Alphabetic Principle&quot; procedure.</td>
<td>• Ask child to tell about his/her writing.</td>
</tr>
</tbody>
</table>
Table 2: Summary of Data Analysis Procedures

<table>
<thead>
<tr>
<th>Step One: Analysis of data for each study conducted separately</th>
<th>Task</th>
<th>Data Collected</th>
<th>Analyses Conducted</th>
</tr>
</thead>
<tbody>
<tr>
<td>Qualitative:</td>
<td>Task #1: Document evolving learner hypotheses and interpretations of reading/writing in each study.</td>
<td>- Field notes across kindergarten and first grade for each study.</td>
<td>- Code data (codes emerge from each data set).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Transcripts of learner talk.</td>
<td>- Determine patterns for each focal learner.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Written artifacts.</td>
<td>- Summarize data patterns by half year periods.</td>
</tr>
<tr>
<td></td>
<td>Pre/post data for each focal learner in each study on the following 6 measures:</td>
<td></td>
<td>- Reduce data narratives to grids for each learner.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Intentionality</td>
<td>- Aggregate learner patterns across sites</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Concepts about Print</td>
<td>- Determine major patterns for each study.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Alphabetic principle</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Story structure</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Written narrative register</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Concepts of writing</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Combined: Task #3: Compare learner interpretations of reading/writing across skills-based and whole language settings.</td>
<td>- Field notes/transcript accounts of focal learner actions and utterances.</td>
<td>- Write global hypotheses and substantiation.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>- Data narratives and grids.</td>
<td>- Compare across data sets using tracer units.</td>
</tr>
<tr>
<td></td>
<td>Pre/post data for learners in each study.</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Task #4: Compare change in written language knowledge scores across skills-based and whole language settings.</td>
<td>- Six tasks measuring knowledge of written language pre/post for learners in each study.</td>
<td>- Analyze between group scores with a 2(group) x 2(time) mixed measure ANOVA with repeated measures.</td>
</tr>
<tr>
<td>Quantitative:</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Task #5: Compare reading processes of representative focal learners across studies.</td>
<td>- Reading samples from the mid-point of first grade in two contexts, self-selected trade books and teacher-selected texts.</td>
<td>- Compare miscue and strategy patterns across contexts and across studies by proficiency levels.</td>
</tr>
<tr>
<td>Step Two: Comparison of data across studies</td>
<td>Combined:</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Task #5: Compare reading processes of representative focal learners across studies.</td>
<td>- Reading samples from the mid-point of first grade in two contexts, self-selected trade books and teacher-selected texts.</td>
<td>- Identify kind of writing, amount, and task. Comparison across studies.</td>
</tr>
<tr>
<td></td>
<td>Task #6: Compare writing events across studies and describe kind of writing produced.</td>
<td>- Compare kindergarten and first grade writing data for 2 time samples (Nov. and Feb.) in both studies. Data includes all writing samples and related field notes</td>
<td></td>
</tr>
</tbody>
</table>
### Table 3: Analysis and Scoring Procedures of Written Language Knowledge Assessments

<table>
<thead>
<tr>
<th>Task</th>
<th>Scoring Process</th>
<th>Scoring Rubric</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentionality</td>
<td>Range of scores from 1-5</td>
<td>1=No evidence of the concept of intentionality</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2=Response limited to view related to school factors</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3=Child sees purpose of writing as labeling or naming</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4=Child identifies writing as something serving broader purpose</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5=Strong evidence of concept that written language carries meaning</td>
</tr>
<tr>
<td>Concepts About Print</td>
<td>Scored using Clay's (1979) protocol for Stones.</td>
<td>N/A</td>
</tr>
<tr>
<td>Alphabetic Principle</td>
<td>Scoring scale was applied to all three measures with the most frequently occurring level used. Range of scores from 1-8 points.</td>
<td>1=No evidence of letter/sound knowledge (scribbles, pictures)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2=Single letter represents word (P for &quot;pink,&quot; semi-phonetic)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3=Two letters represents a word (PK for &quot;pink,&quot; semi-phonetic)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4=Maps all sounds heard (DA for &quot;day,&quot; phonetic)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5=Maps letter/sounds based on articulation, no nasal articulation (SG for &quot;song,&quot; phonetic)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6=Maps letter/sounds based on articulation, includes vowels (PLEY for &quot;play,&quot; phonetic)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7=Conventional spelling demonstrated; shows visual, phonetic, and nasal sound strategies</td>
</tr>
<tr>
<td></td>
<td></td>
<td>8=Majority of words spelled conventionally</td>
</tr>
<tr>
<td>Story Structure</td>
<td>Range of scores from 0 to 8 points. All elements scored.</td>
<td>2 pts.=Setting</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2 pts.=Reaction involving response of character(s) to formation of a goal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 pt.=Beginning or precipitating event of an episode</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 pt.=Attempt or effort to achieve a story goal</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 pt.=Outcome or stated success or failure of the attempt</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1 pt.=Ending--providing a consequence</td>
</tr>
<tr>
<td>Written Narrative</td>
<td>Scored using Purcell-Gates (1988) protocol</td>
<td>N/A</td>
</tr>
<tr>
<td>Register</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Concepts of Writing</td>
<td>Range of scores from 1-7. Each artifact scored.</td>
<td>1=Drawing: line borders, picture-like marks</td>
</tr>
<tr>
<td></td>
<td></td>
<td>2=Scribbles: writing-like marks, scribbles, shapes</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3=Letter/Number Forms: scribbles with letters, letter-like, number-like forms</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4=Letters Mixed: pictures with embedded print, letters with numbers</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5=Letters: Ungrouped letters, letter strings</td>
</tr>
<tr>
<td></td>
<td></td>
<td>6=Words: Pseudo words, words</td>
</tr>
<tr>
<td></td>
<td></td>
<td>7=Words/Sentences: Extensive word writing, sentences, or stories</td>
</tr>
</tbody>
</table>
Table 4: Comparison of Phonics Strategies in Mid First Grade

<table>
<thead>
<tr>
<th>Strategy</th>
<th>Whole Language</th>
<th>Skills Based</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19</td>
<td></td>
</tr>
<tr>
<td>Confines writing to words with known spelling</td>
<td>xx</td>
<td>x</td>
</tr>
<tr>
<td>Copies words to complete writing tasks</td>
<td>x x</td>
<td>x</td>
</tr>
<tr>
<td>Makes a series of guesses to identify an unknown word in reading. (BL-, BLO, BLAY, BLOK, PLAY, PLOK for plate)</td>
<td>x</td>
<td>x</td>
</tr>
<tr>
<td>Writes single letter for salient sound in a word. Context: teacher support. (D for these; ICP for I saw pigs)</td>
<td>x x x x</td>
<td></td>
</tr>
<tr>
<td>Represents some phonemes with appropriate letter. (GT for Cheetah)</td>
<td>x x x</td>
<td></td>
</tr>
<tr>
<td>Sounds out words in reading by exaggerating sounds (FA LA GUI for flag)</td>
<td>x x x</td>
<td></td>
</tr>
<tr>
<td>Represents some phonemes in word with appropriate letters. (CLSRME for classroom; W1 for why)</td>
<td>x x x</td>
<td></td>
</tr>
<tr>
<td>Produces a nonsense word in reading by using graphophonic cues.</td>
<td>x x x</td>
<td></td>
</tr>
<tr>
<td>Miscues with matching for the word's beginning sound. (RED for rose; ME for many)</td>
<td>x x x x x</td>
<td></td>
</tr>
<tr>
<td>Uses letter sound relations to self-correct in reading (SHIVER corrected to shouted)</td>
<td>x x x x</td>
<td></td>
</tr>
<tr>
<td>Produces transitional spelling for unknown words. (HED UNDR THE HA YSAK for hid under the haystack)</td>
<td>x x x x x x</td>
<td></td>
</tr>
<tr>
<td>Produces conventional spelling</td>
<td>x</td>
<td></td>
</tr>
<tr>
<td>Reads conventionally using well-organized graphophonemic knowledge</td>
<td>x x x x x x x</td>
<td></td>
</tr>
</tbody>
</table>

Key:

Whole Language Learners
1=Addie 6=Eustice 11=Tara
2=Ann 7=Isaac 12=Willie
3=Carlie 8=Jason 13=Andrey
4=Charlie 9=Maury 14=Ellen
5=Douglas 10=Shemeka 15=Eric
16=Janice 17=Mary
18=Maya 19=Rodney

Skills-Based Learners
Table 5
Means and standard deviations obtained on outcome measures

<table>
<thead>
<tr>
<th></th>
<th>Skills-based Pretest</th>
<th>Skills-based Posttest</th>
<th>Whole language Pretest</th>
<th>Whole language Posttest</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentionality (1-5)</td>
<td>2.71 (1.68)</td>
<td>4.43 (1.22)</td>
<td>2.29 (1.35)</td>
<td>4.86 (0.65)</td>
</tr>
<tr>
<td>Concepts/Print (0-24)</td>
<td>7.27 (4.30)</td>
<td>16.60 (4.69)</td>
<td>6.43 (3.88)</td>
<td>18.52 (2.77)</td>
</tr>
<tr>
<td>Alpha. Prin. (1-8)</td>
<td>1.13 (0.35)</td>
<td>4.60 (1.45)</td>
<td>1.05 (0.22)</td>
<td>4.48 (1.63)</td>
</tr>
<tr>
<td>Story Struc. (1-8)</td>
<td>3.29 (1.59)</td>
<td>4.57 (1.83)</td>
<td>3.62 (1.75)</td>
<td>5.43 (1.33)</td>
</tr>
<tr>
<td>Written Reg. (0-102)</td>
<td>23.92 (18.52)</td>
<td>43.00 (16.95)</td>
<td>19.58 (13.43)</td>
<td>63.42 (18.20)</td>
</tr>
<tr>
<td>Concepts/Wrtg. (1-7)</td>
<td>3.71 (1.92)</td>
<td>5.93 (1.21)</td>
<td>3.49 (1.88)</td>
<td>6.43 (0.51)</td>
</tr>
</tbody>
</table>

Note: The scores under each measure are the possible range, except for written register which is the actual range. Standard deviations are in parentheses.

* Significant Group X Time interaction (p<.05) was obtained.
Table 6: ANOVA Table for Written Register

<table>
<thead>
<tr>
<th>Source</th>
<th>DF</th>
<th>SS</th>
<th>MS</th>
<th>F</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Between</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>A Group</td>
<td>1</td>
<td>956.47</td>
<td>956.47</td>
<td>3.91</td>
</tr>
<tr>
<td>B/A Teachers within Group</td>
<td>2</td>
<td>489.04</td>
<td>244.52</td>
<td></td>
</tr>
<tr>
<td><strong>Within</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C Time</td>
<td>1</td>
<td>15297.07</td>
<td>15297.07</td>
<td>171.93</td>
</tr>
<tr>
<td>AC Group x Time</td>
<td>1</td>
<td>2486.88</td>
<td>2486.88</td>
<td>27.95a</td>
</tr>
<tr>
<td>BC/A</td>
<td>2</td>
<td>177.94</td>
<td>88.97</td>
<td></td>
</tr>
</tbody>
</table>

*aSignificant p<0.05*
### LEARNER INTERPRETATIONS

#### Table 7
**Learning Opportunities Across Curricula**

<table>
<thead>
<tr>
<th>Phonics Skills-based</th>
<th>Learning Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Growth</td>
<td>Letter/sound relations were addressed in skill lessons. Teachers showed how to sound out words and learners sounded out words as they read aloud. Worksheets about phonics were required as seatwork. Boardwork asked learners to copy words grouped by letter/sound patterns.</td>
</tr>
<tr>
<td>Whole language</td>
<td>Teachers demonstrated sounding out during whole group instruction with big books. In reading lessons letter/sound relations were one of the cuing systems that learners used to figure out words. Writing workshops included help for individual learners grappling with what letters to write for their intended meaning. Peers provided letter/sound information during daily writing.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Response Skills-based</th>
<th>Learning Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>to Literature</td>
<td>Children listened to stories read aloud and responded to the teacher's questions. Children read trade books of their choice when their seatwork was completed or during morning lunch-count routines.</td>
</tr>
<tr>
<td>Whole language</td>
<td>Tradebooks were the primary reading material and learners read books of their choice independently. Read-alouds with the teacher included children's talk during the story. Information was provided about authors, illustrations, genre, and connections across literary works.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Writing Skills-based</th>
<th>Learning Opportunities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tasks and Products</td>
<td>Writing tasks were assigned and generally addressed specific skills in the basal program. Learners copied sentences using basal sight words. During boardwork they competed sentences by choosing from word choices that were generated by class members. They worked on specific writing lessons in the Think and Write workbook. There were some periods where writing journals were used.</td>
</tr>
<tr>
<td>Whole language</td>
<td>Daily writing workshop periods included sustained writing about self-selected</td>
</tr>
</tbody>
</table>
topics. Teachers provided individual conferencing during writing workshops. They also demonstrated using letter/sound knowledge to spell words. Learners used trade books to prompt topics and word choices. They copied from books. Peers suggested ideas to one another and worked together on spelling. Learners wrote stories and read them to others.
Appendix  Sample grid of learner patterns

Grids summarize learner patterns of activity in reading and writing as documented in field notes. They include notations about activity during instructional periods, information about stance, and dates of important vignettes.

**Name:** Willie  **Time Interval:** Jan. - May of first grade

**Curriculum:** Whole Language

**Reading activity:**

- Reads whole books with teacher, discusses gist.

**Writing activity:**

- Writes books with partner, suggests words, writes some sentences, talks about what could come next in story.
- Sustained writing every period from February on. Writes about personal experience. Composing behavior includes saying words and phrases as he writes them, rereading, asking for spelling, completing the written piece.

**Instruction periods (whole group):**

- Reads along with the teacher. Continually interrupts story reading with comments about pattern or statements connecting prior knowledge with story.

**Stance:**

- Active, interested in reading and writing. Sustains independent work, often deeply engrossed.

**Vignettes:**

- 1/16 Sustained reading with teacher, whole book.
- 3/6 Revision conference with teacher, adds quotation marks.