

THE EFFECT OF THE PHYSICAL CLASSROOM ENVIRONMENT ON LITERACY OUTCOMES:

**How 3rd Grade Teachers use the Physical Classroom to Implement a
Balanced Literacy Curriculum**

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By

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The undersigned, appointed by the dean of the Graduate School, have examined the thesis entitled

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TO IMPLEMENT A BALANCED LITERACY CURRICULUM

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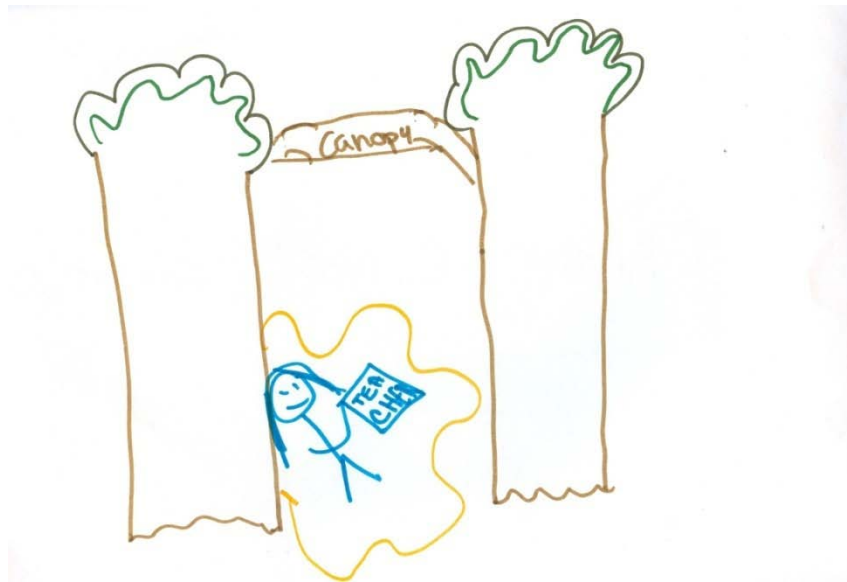
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DEDICATION

To my parents, Leon and Ethel Fisher, who let me love to read.



And, to Steven, Sarah, Zoe, and Andrew: late dinners and lost weekends were more than made up for by our many evenings of us doing our homework together: imagine Design Theory meets Project Runway, and you'll get a picture of our life for the last three years.

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ABSTRACT

This study identified how 3rd grade teachers use the physical classroom environment as they implement a balanced literacy program in order to improve their students' literacy outcomes. Teachers' perceptions of the classroom environment with regard to literacy were explored, as were the ways in which they used the classroom to support implementing the various techniques and strategies associated with balanced literacy methods. The study found that teachers believed that the classroom design should be aligned to the educational theory and methodology being implemented. While many of the prescribed environmental attributes for balanced literacy were achieved in different classrooms, some were not. Findings show that teachers and students use the physical environment as a tool and a setting for balanced literacy, and as such, it may positively impact literacy outcomes.

INTRODUCTION AND BACKGROUND

Four elements form the foundation of this research study: the definition of “literacy,” and why literacy is important today; the key aspects of contemporary literacy education theory regarding the social and physical space; balanced literacy and guided reading teaching methods and their roots in English informal education and American open classroom approaches and philosophies of education; and, how environment-behavior theory may be applied to literacy education;

As defined by the Workforce Investment Act of 1998 and the National Literacy Act of 1991, literacy is "an individual's ability to read, write, speak in English, compute and solve problems at levels of proficiency necessary to function on the job, in the family of the individual and in society." The National Assessment of Educational Programs (NAEP) 2000 national assessment of fourth-graders' reading ability, found that, in 2000, 32% were below the reading achievement Basic level, 32% were within the Basic level range, 26% were within the Proficient level range, and 10% were within the Advanced level range. These statistics are of fourth-grade students in urban fringe/large town schools, the representative demographic of the participant schools of this study, (Donahue, Finnegan, Luftus, 2000).

The Executive Summary of the NAEP 2001 report affirms the necessity for students to acquire the skills required to read widely and critically, in order to be successful in the greater world of information. NAEP states, “The centrality of reading has long been recognized in the curriculum of our schools for its importance in shaping both personal selves and participants in a democratic society” (Donahue, Finnegan, Luftus, 2001). Further findings from the

International Adult Literacy Survey assessment indicated that only half of the U.S. population 16-65 years of age had reached the minimum standard, Level 3, identified as the minimum requirement for success in today's labor market. A vital relationship between literacy, skills, and adult success in the labor market exists. It has been said that the object of education is not the individual or his interests; it is primarily the means by which society maintains itself, through the systematic socialization of the child into the political society and specific social level for which he or she is destined (Graubard, 1971, p.4). The definitions proffered by these governmental agencies are based on this view of education as a tool of socialization, not of individual growth.

Literacy education is an active, activist, and heavily researched field. Literacy research is concerned with the "big" topics, such as defining literacy itself; understanding the mechanisms of teaching literacy; how one becomes literate, such as comprehension and self-expression; particular social groups, such as adolescents, their self-definition and sense of identity, and methods of communicating; and the historical, cultural, and social theories concerning the acquisition of literacy (Robinson, McKenna, Wedman, 2004). Literacy education research also addresses literacy and technology, multiculturalism, age, and gender; and non-academic, and non-traditional or non-academic literacy, also referred to as "hidden literacy" practices. It is an important to note that literacy education research points to a relationship between literacy and the physical setting; and personal, political, and cultural empowerment (Pressley, 2004, p.284), and the idea of spatiality as part of literacy is becoming more accepted (Leander, 2004). The concept of social space is important in current literacy research, in describing situations and settings in which hidden literacies are unveiled or invited to flourish, resulting to individual and

group empowerment. Much of the research into the creation of social space within an educational environment, i.e., a classroom, centers on the relationship between space and time. The work of Henri Lefebvre is often referenced by other literacy theorists. In *The Production of Space*, Lefebvre writes,

There is one question which has remained open in the past because it has never been asked: what exactly is the mode of existence of social relationships? Are they substantial? natural? or formally abstract? The study of space offers an answer according to which the social relations of production have a social existence to the extent that they have a spatial existence; they project themselves into a space, becoming inscribed there, and in the process producing that space itself (1998).

Lefebvre's concept of social space is that it is embodied in or enmeshed with physical space. Lefebvre's concept of the interweaving of social and physical space was influenced by the work of literary theorist, Bakhtin, who coined the term "chronotope," literally, "time-space" (Hirst, 2004). A chronotope is a physical setting that supports a specific set of social behaviors that take place over time, and which also defines specific social roles for the inhabitants. For example, with regard to literacy, the roles created by a given chronotope can imprison certain "players" in the role of illiterates, while a different chronotope may give other players personal power. Literacy education theorists have coined key terms, such as, *laminations*, *thirdspace*, *thinspace*, *thickspace*, and *hybrid space*, in addition to chronotope, in an effort to communicate about social space, what it is and how it is created, and its effect on individuals in terms of self-definition, personal power, and literacy.

It has been said that certain activities are reinforced by occurring in a given or specific physical locations or environments. Moje writes, "Identity can be considered an enactment of self made within particular activities and relationships that occur within particular spaces (geographic, social, electronic, mental, and cultural) at particular points in time" (Moje, 2004). Moje asserts that the material environment may either constrain or support different expressions of identity, e.g., "I am a writer," "I am a reader." To the critical literacy theory triad of culture-history-society, Leander adds the concept of "spatiality". He notes that "deskwork contributes to a spatialized meaning of schooled activity and schooled identity" (Leander, 2004); essentially, that the physical space of a classroom and the activities that take place within are inextricably linked (Leander, 2004).

Balanced literacy is a method of literacy education. The purpose of balanced literacy is to enable children to become independent readers, while participating in socially supported activity. It is a, "context in which a teacher supports each reader's development of effective strategies for processing novel texts as increasingly challenging levels of text with support" (Fountas, 1996). In balanced literacy, of which a method called "guided reading" is a part, the teacher's role is to observe the individual children closely as they work, foster independent learning and self-directed literacy, and to carefully provide appropriately leveled books and literacy activities for each child. The underlying epistemology is constructivism, where it is defined as, "the meaning-making activity of the individual mind" (Crotty, 2005). The child, through increasingly challenging literacy activities, constructs meaning and builds both an expanded view of the world, as well as a view of herself as a capable, self-directed,

independent reader and writer—in other words, as literate. Balanced literacy asks the teacher to create discrete physical areas within the classroom, such as a library and areas for individual and different-size group work, to support the specific guided literacy activities. As Fountas and Pinnell have written, “The curriculum for creating a learning community is delivered in the way the classroom is organized, in the consistent expectations for individual, small-group, and whole-class operations, and in the climate you [the teacher] maintain (2001). In balanced literacy, the teacher is responsible for “delivering” the curriculum, and the organization of the classroom is a key component for the success of the program.

The approach to teaching reading and writing called, “balanced literacy” is normative. In order to fully understand it, one must understand guided reading’s historical roots in the “informal education” and open classroom movements of the 1960’s and ‘70’s. Informal education, according to Weber, “...refers to the setting, the arrangements, the teacher-child and child-child relationships that maintain, restimulate if necessary, and extend what is considered to be the most intense form of learning, the already existing child’s way of learning through play and through the experiences he seeks out himself” (Weber, 1971, p. 11). Weber, in her definitive study of the English infant school and informal education, summarizes the historical lineage of informal education: from Piaget, spontaneous activity and play as the way a child naturally learns; from Montessori, the concepts of individual pace and “one’s work”, as well as the mixture of abstract and experiential learning; and from Dewey, the emphasis on learning generated from a child’s activities, experiences, and social interactions and relationships (Weber, 1971, p.170). The English informal schools required that teachers closely observe the individual children at work, ascertain his or her level of understanding, and

maintain detailed anecdotal records, observations, and notes for each child, especially noting the particular objects of a child's interest. As for her role in the classroom, within informal education, a teacher's responsibility was to implement and open up a child's purposes. Informal education emphasized respect for a child's "own question and a child's own purpose" (Weber, 1971, p. 109). Weber writes that the informal education school setting must be free enough to allow an individual to follow his interests, supportive as he searches for definition and relevance, and rich enough to invite and nurture a child's curiosity (1971, p.11). With particular relevance to literacy, a typical English school classroom at the infant level (American grades K-3) which had implemented informal education would have a special area with comfortable chairs and books and children's artwork, intended for reading. All over the classroom, Weber notes, there are words displayed. The influential Central Advisory Council for Education Plowden Committee Report of 1967-71 of Great Britain, entitled, "Children and Their Primary Schools," posited the child as the active agent of his own learning, psychologically and physiologically motivated; and defined the role of the school, as providing an environment for supporting the child's individual development, including play as vital to the personal and social development of a person, and allowing a child to proceed at his own pace (Weber, 1971, p. 172). The Plowden Committee declared, "At the heart of the educational process lies the child" (Silberman, 1972, P. 139.) The notes of Casey and Liza Murrow specifically mention certain key elements of the typical informal education classroom: the appearance and arrangement of furniture is oriented to the children's needs; no desks in rows; no central, overwhelming blackboard; small tables and chairs in groups; a library corner; a math area; walls decorated with the children's work; and a "teacher's desk [which is] either non-existent or pushed into a corner where it serves as

another place to store papers, children's work, plants, and materials" (Silberman, 1972, p.16). Also, "The flexible use of space and time in informal English primary schools encourages children to feel that the classroom, and indeed the school as a whole, belongs to them (Silberman, 1972, p. 298). The Murrow's write that a typical school day will start with a meeting of the whole class, with the children gathered on the floor around the teacher. "The early morning gathering provides a few minutes for the teacher to be close to the children and for the children to be close to each other" (Silberman, 1972, p. 16-17). The British approach also took root in the United States. In 1969, a researcher visiting a classroom in North Dakota observed that, at first it seemed that there was no teacher, for, "she no longer dominates the room; the children and their activities do" (Silberman, 1972, p. 43). This researcher, Arlene Silberman, 1972, was investigating the effect of the special division, teacher training program called "New School," instituted at the University of North Dakota. The objective of this program was to redefine progressive education, reclaim the teacher's role as manager, guide, and resource person, and blend the traditional American emphasis on basic skills with the tenets and practices of British elementary education focused on individualized and self-directed learning (Silberman, 1972, pp.44-48). Similar programs could be found in Pennsylvania, Minnesota, Vermont, New Hampshire, Arizona, California and New York, to name a few (Silberman, 1972, p.55-59). Lillian Weber, as a professor of Early Childhood Education at the City College of New York created the Open Door and Open Corridor projects in the New York City public schools, and trained hundreds of teachers in the informal education method during her career.

The trends toward child-centered learning and informal education of the 1960's in Britain are only a part of the parentage of the guided reading method of teaching literacy. In the 1980's, a New Zealand educator and educational psychologist named Marie Clay devised a technique of intensively addressing the reading problems of 1st graders who were substantially behind the literacy levels of their peers. Clay's techniques grew into a method known as "Reading Recovery." In 1984, professor of education, Gay Su Pinnell, brought Reading Recovery to Ohio State University, and placed it within a teacher training program that she called the Literacy Collaborative. The purpose of the Literacy Collaborative was to train both teachers and trainers in Reading Recovery methods. Guided reading, as a method of teaching literacy, rose directly from the techniques of Reading Recovery. Pinnell's colleague, Irene Fountas, professor of education at Lesley College in Boston, Massachusetts, initiated another Literacy Collaborative at Lesley. Fountas and Pinnell are now considered the founders of the guided reading/balanced literacy movement in the United States. Their publications aimed at supporting the work of the teacher-in-the-classroom, as she implements guided reading, are considered the "bibles" of the method. The books of Fountas and Pinnell include chapters devoted to the design of the physical "guided reading" classroom, with directives on requisite areas, arrangement of furniture, and display of books and student work. For example, in their 1996 book, "Guided Reading: Good First Teaching for All Children," the authors call for an organized environment which "is truly supportive and moves children toward independence" (1996, p.43). In a long chapter, areas for different size groups, including a rug area with easels; a leveled library; and, a guided reading area; a print-rich classroom, including a "word wall"; pocket charts, mailboxes, message boards, are all prescribed as necessary components of a learning environment

designed for literacy. They also include centers, defined as, “a physical area set aside for specific learning purposes” (1996, p. 49). Within the same chapter, Fountas and Pinnell call for designing an organized environment before the school year begins (1996, p. 50). In another teacher manual, “Guiding Readers and Writers, Grades 3-6,” Fountas and Pinnell make clear that the design of the classroom communicates the expectations for individual behavior and group interactions, and that “the curriculum for creating a learning community is delivered in the way the classroom is organized” (2004, p. 88). The authors advise, “You’ll want to address both *ownership* and *independence*, two key concepts that permeate your classroom life” (2004, p. 89). Quite notably, no mention is made of the teacher’s personal desk in either chapter.

Fountas and Pinnell include bibliographies in their publications which reference “professional literature.” In a close review, the professional literature referenced is entirely the literature of literacy research and practice, and includes no references to environment and behavior studies (See Appendix C).

In *Creating Architectural Theory*, Jon Lang describes architectural environments as *behavior settings*. This is an echo of “chronotope.” Lang says that the environment consists of a set of behavior settings, existing simultaneously with each other, and basically consisting of two components, a *standing pattern of behavior* and a *milieu*. The milieu is the physical structure, which affords both direct support for human activities, and indirect, symbolic, or effective meanings and associations for the human user or observer (Lang, 1987). Lang writes about the fundamental concepts of the person-built environment relationship:

The environment can be considered to consist of interrelated geographic, built, social, and cultural components that afford certain behaviors in

consistent ways. The set of *affordances* of the environment at a particular location constitutes the *potential environment* for human behavior at that place...The role of the architectural environment is...accommodative and not deterministic except in the negative sense: if the built environment does not afford a behavior, the behavior cannot take place (Lang, 1987).

The architectural environment is not, as Lang notes, deterministic, unless it is designed to restrict particular behavior, such as in a prison where free movement is restricted. The architectural environment cannot make someone behave in a pre-determined way. However, according to Lang, a physical setting that provides an affordance for a particular human behavior can be purposefully created. It seems that literacy research has been brought to the precipice of the question of what role the purposeful *design* of the milieu may play in literacy education. If a certain behavior, such as fluent reading or fluent verbal communication, is desired; then, one might ask, how can the milieu support that behavior? While many contemporary literacy researchers acknowledge social space, few of them are aware of the power of physical space, or milieu, in order to *afford* the social space it contains.

In summary, the classroom may be used as if it were a *tool* like any other tool—used by the teacher and students for various purposes; such as, to socially and self-construct the students as literate (to self-identify as literate people, to become empowered); or, to actually teach literacy, through the ease of access to materials of literacy, or with visual cues to trigger the four strategies outlined by M. Pressley (2004). Alternatively, the classroom is an *affordance*, as described by Lang, where it may be the setting or milieu for some activity or state of mind, but may not actually change or create behavior through its design.

The purpose of this study was to identify how teachers and students perceive that they use the physical classroom environment in order to improve literacy outcomes. Teachers' perceptions of the classroom environment with particular regard to teaching literacy were explored, along with inquiry into the varied techniques and strategies associated with guided reading techniques, which prescribes specific use of the physical environment. Students were asked how they used the classroom for literacy activities, and how they felt about it. The "physical classroom environment" for the purpose of this study is defined as the physical room in which the teacher or student was based, including its spatial elements, such as walls, ceiling, floor, windows; as well as classroom furnishings such as, but not limited to, chalkboards, tackboards, desks, chairs, rugs, easels, counters and work surfaces, and computer equipment. The project took as its focus the following research questions: 1. how do 3rd grade teachers and students perceive their classroom environment with regard to teaching and learning literacy? 2, how do teachers and students use the classroom for teaching and learning literacy? and, 3. what are the attributes of a classroom that best supports the balanced literacy method in achieving its goals?

Personal Statement

As a researcher, it has been important for me to articulate and be reflective about my biases and how these might affect the collection and interpretation of data. Charmaz writes, "Grounded theorists' background assumptions and disciplinary perspectives alert them to look for certain possibilities and processes in their data... [and] shape research topics and conceptual

emphases” (2006). My background is that of a trained Montessori pre-primary educator, a professional licensed interior designer, and an interior design educator and administrator.

Montessori education is based on the idea that children can independently choose the educational activities for which they are developmentally ready. A major component of Montessori education is the design and arrangement of the physical classroom environment to facilitate independent learning. A unique attribute of the typical Montessori classroom is visual order and beauty, and careful display and arrangement of artwork and furniture in the service of the independence of the young child, and the cooperative activities of the classroom community. The entire school is termed the “Children’s’ House,” in which the teacher, called the “Directress,” refrains from taking an authoritarian role.

As a Montessori directress, I loved the process of observing the children use the classroom, and then designing the environment for the children’s intellectual, emotional, and physical growth. I returned to college to study interior design. As a practicing professional interior designer for over 25 years, I am very experienced in interviewing people, observing their behavior and use of the physical environment, articulating a detailed program of requirements or client needs, and then creating interiors that fulfill the clients’ or end-users’ needs. My training in art and design has instilled in me strongly held values regarding the necessity of particular aesthetic qualities in the physical environment, such as scale, balance, natural light, visual and physical order and organization, visual interest, and appropriate use of materials and harmonious textures, patterns, and colors.

I am aware that I have a deep sensitivity and bias toward the design of interiors which support the activities and people that inhabit them, which are aesthetically pleasing, and which

are based on the careful application of the elements and principles of design. The most difficult aspect of this research for me personally was to keep myself from interjecting my own opinion on decisions that had been made by the teachers in designing their classrooms. Once the interviewees learned that I was a professional designer, they actively requested my opinion. It was also difficult during coding to “hear” what the teachers considered most important. Ultimately, the research design, which included the need to re-read the transcribed interviews multiple times and the use of a peer code reviewer, prevailed. In addition, it may be said that the work of an interior designer is to survey or observe a physical environment and how it is used, identify problems, and work to solve them. In this sense, my design skills and knowledge have been extremely useful.

Theoretical Perspective

Crotty’s Schema Applied to this Study

Crotty’s rubric of qualitative study asks researchers to articulate the epistemology, theoretical perspective, methodology, and methods of their studies (Crotty, 2005) (See Table 1). For this study, the epistemology is social constructionism, or “the mode of meaning generation—where social reality is a function of shared meanings; it is constructed, sustained, and reproduced through social life” (Crotty, 2005). The theoretical perspective or philosophical stance underlying the methodology of this study is Interpretivism, specifically Symbolic interactionism. Crotty (2005, p. 67) writes, “The interpretivist approach...*looks for culturally derived and historically situated interpretations of the social life-world*” The interpretivist approach is concerned with understanding, not causality. As Crotty describes it, social science is

concerned largely with the aspects of the world that are unique, individual, and qualitative.

Symbolic interactionism, as articulated by Herbert Blumer, has three basic assumptions or tenets:

- “that human beings act toward things on the basis of the meanings that these things have for them’;
- ‘that the meaning of such things is derived from, and arises out of, the social interaction that one has with one’s fellows’;
- ‘that these meanings are handled in, and modified through, an interpretive process used by the person in dealing with the things he encounters’.” (Crotty, 2005).

This study, the subject of which is how teachers and students use the physical classroom for literacy activities, has as its goal the understanding of the meaning of the classroom as a milieu, as a container of objects, places, and spaces in which activities occur and in which human beings interact with the physical aspects of the room and with each other, and as a teaching tool. The central notion of symbolic interactionism, “the putting oneself in the place of the other” (Crotty, 2005), is important, as the goal of this research study is to understand the point of view of teachers and students in the teaching and learning of literacy, situated within a physical classroom.

For this study, semi-structured interviews, photographic documentation of the physical environment, open coding, and theoretical memos were used. Coding began shortly after the data were collected, with analysis proceeding as soon as the initial sets of data were collected. This method allowed for the constant revision, as necessary, of the interview instrument, in order to pursue points of interest identified through the initial coding process.

Table 1. Crotty's Schema, as used in this study

Epistemology	Theoretical Perspective	Methodology	Methods
Social Constructionism	Interpretivism: -Symbolic Interactionism	Grounded Theory	Observation Interviews -Group -Individual -Documents Analysis of photos of classrooms

METHODS

Overview

The qualitative research method used in this study was grounded theory. Grounded theory is a process of inductive theory building based on the observation and analysis of the data collected (Crotty, 2005, p. 78). The first grounded theory question is, "What is happening here?" (Glaser, in Charmaz, 2006). This question guided the study.

Through grounded theory, a dialogue between researcher and data is formed, and the process of going back and forth from data to analysis affords opportunities for a deep and focused understanding of, and special insight into, the researcher participants and setting on the part of the researcher. The data may be analyzed as it is collected, and the researcher is permitted, even encouraged, to follow new threads or themes suggested by what has already been analyzed, and to collect additional data throughout the process (Charmaz, 2006). This design flexibility is a characteristic of grounded theory. Data may be collected in several different ways, utilizing varying formats. Charmaz makes special note that the methods one chooses, "...affect[s] *which* phenomena you will see, *how*, *where*, and *when* you will view them, and *what* sense you will make of them" (2006). While the data collected will vary in quality, relevance, and usefulness, the grounded theory process of ongoing analysis allows the researcher to continually evaluate what has been collected, and guide the study in a more meaningful direction. Grounded theorists do not force the data to fit their preconceived ideas or theories; rather, they follow leads that arise from the data, which they define (Charmaz, 2006).

This report represents the first phase of a larger research project on the same topic. During this study, data were collected which reflected the views of teachers and students at the 3rd grade level as they implemented and experienced a balanced literacy curriculum, based on the ideas of literacy educators Irene Fountas and Gay Su Pinnell. Data were collected through individual and group interviews, analysis of photographs that document the selected 3rd grade classrooms, and observation. A coding framework was developed using the data from the interviews, which was then compared to codes derived from the analysis of the photographs. From these codes, themes were identified. The larger study was “Approved Restricted as ‘Exempt’ “on April 18, 2008 by the University of Missouri’s Institutional Review Board, and is under consideration for approval by the designated school districts.

Access for observation and interviewing varied from school to school. In all, the researcher observed three 3rd grade teachers with their students during the school day as they engaged in literacy activities; photographed five classrooms, empty of inhabitants; and interviewed five teachers, and five students. Specific teachers and classrooms were identified by their individual building principals, and the researcher met each teacher, including one who was not interviewed. The first school was chosen because the researcher knew the building principal and made initial contact with her. The additional schools were identified through theoretical sampling, or by the principal-intern within the initial school, who will become building principal for the coming school year, 2008-2009. In addition, one classroom was surveyed and measured, and a measured floor plan was drawn. Teachers and students were interviewed in their classrooms. The classroom setting served to provide visual cues and be a kind of prop during the interview sessions. The classrooms were the home turf of the

interviewees, and it helped the interviewees to be relaxed during the interview. The interviews were taped using a digital voice recorder, and later transcribed.

The settings

The schools were located in southern New York State, in suburban areas. The student population ranged from working to middle class income families. Importantly, all five schools utilized a balanced literacy approach in 3rd grade. All the schools were public schools. All interviews took place within the interviewee's classroom.

The participants

The 5 teachers had between 7 and 18 years of experience, and were in their mid-thirties to fifties. They had varied educational histories, but each had attained a Masters degree in education, with differing emphases, and was tenured within her school district.

The 5 student interviewees were boys and girls, third-graders, ages 9 and 10. The single individual student interview took place after school, in the student's empty classroom; the two pairs of students were interviewed during the school day, in their classroom, with the other children and the teacher present. For the larger study, it is intended that 10 teachers and 10-20 students will be interviewed, and that Informed Consent will be received from each participant. For this phase of the study, each teacher approached gave their verbal consent. Written parental consent was obtained for the students, who also signed their drawings after the purpose of the study was explained to them. In the larger study, student assent forms will be signed by the students. Interviews were conducted from January through April 2008. Prior to the interviews, the researcher observed in the classrooms of two of the teachers interviewed.

Each teacher was given a verbal description of the project prior to the interview, and the group interviewees were provided a list of sample questions.

Data Collection

Photographs

Photographs were taken when the classroom was empty: before or after school, or during a time when the children were at another activity. Each school district specifically prohibited the photographing of children. The researcher used a procedure of photographing the overall room from several angles including the ceiling; starting the sequence from the hall outside the classroom door, and then photographing inside the room starting at the door, proceeding in a counter-clockwise direction. Finally, photographs were taken of individual areas such as the teacher's desk, the children's desks, the rug, library, chalkboard, and other key areas. Photographs were taken using a digital camera, and transferred to the researcher's computer.

Observations

During the observations, the researcher was asked to sit in a chair placed in an out-of-the-way spot designated by the teacher, and from there was able to see most of the classroom. The researcher took notes regarding the student and teacher activities, and tried to avoid making eye contact or speaking with any of the students or the teacher during the observation.

Interviews

Throughout the process, the researcher created memos, which also affected the question creation and the ensuing coding.

Pressley, in his essay on his experience in research methods in literacy education, describes his interview questions as needing to be open-ended, “to make certain that the teachers’ thinking was tapped as completely as possible,” the answers filled with informative insights, and containing rich interview data (Pressley, 2004). The recordings of the interviews from the digital voice recorder were loaded onto the researcher’s computer, and transcribed using Express Scribe software and a foot pedal. Interviews were analyzed by the researcher for initial codes, and then focused coding, and finally, themes.

Teacher interviews

One individual and two group (two-person) interviews were conducted with teachers in their classrooms, using semi-structured open-ended questions. For teacher interviews, the questions ranged from asking the teachers to describe their training; to being completely open-ended, such as asking the teachers to describe their ideal environment for teaching literacy. For one of the group interviews, the teachers requested a list of the questions in advance in order to be more prepared. As the interviews progressed, the questions grew more open-ended and less structured.. After the first interview, questions were modified for the second interview.

Questions for the teachers addressed several topics: the teachers’ training in setting up a classroom; the places in the room overtly dedicated to literacy activities; the ways in which the classroom was used for literacy activities by teacher and students; the teachers’ identification of the attributes of the literacy “places,” both overt and hidden, within the classroom. A final question asked the teachers to describe their “ideal place for teaching literacy.” (See Table 2)

Table 2. Interview Questions for Teachers

Title of Study: How does the physical classroom environment affect literacy outcomes?		
<u>Interview questions for Teachers</u>		
Name _____	Date _____	Location _____
<ol style="list-style-type: none"> 1. Did you have any training in setting up your classroom, either in your education courses or from classroom experience? Please describe. 2. What does a good classroom for literacy look like? What does it contain? How is it organized? 3. Where does literacy (reading-writing-oral presentation) occur in your classroom? 4. Which area do you think is the most important in teaching literacy? Which area(s) do you use the most? 5. In what ways does this classroom support instruction? Do you use it like a tool? Is it a setting? Which is your favorite place in the classroom? Why do you like it? 6. Which place in the classroom do you think your children like best? Where do they seem to like to read and write, alone or in groups? 7. If you could teach the activities of literacy in any kind of environment, anywhere in the world, what would that be like? 		

Student Interviews

One child was interviewed individually, and four children from a single classroom were individually interviewed during the school day, in their classroom, with their classmates and teacher present. The first student interview was recorded using the voice recorder and followed the preset interview questions. In the first interview, the student was asked a set of preset questions about the places that she liked to read and write within her classroom. The questions included asking about where the student liked to read and write in the classroom, how she used the library, how the rug was used, if and how she used the hanging anchor charts, and like the teachers, what she thought a good classroom for learning to read and write in would be like. (See Table 3)

Table 3. Interview Questions for Students

Study: How does the physical environment affect literacy outcomes?

Interview questions for Students

Name _____ Date _____ Location _____

1. Show me/tell me about the places in your classroom where reading-writing-speaking happen.
2. Has your teacher made some place special in the room for teaching kids how to read/write/present? What makes it special?
3. Which is your favorite place in the classroom? Why do you like it?
4. What would a good classroom for learning reading/writing/speaking look like? How would *you* design it? Please draw a picture of the classroom you'd design, and tell me about it.
5. Which place in the classroom do you think your teacher likes best?
6. If you could learn reading and writing anywhere in any kind of place in the whole world, what kind of place would that be? Indoors or outdoors? Etc.

Individual student interviews using the semi-structured questions showed that another technique for eliciting data from the children would have to be tried. Below is an excerpt from the individual student interview, which lasted 6 minutes:

Table 4. Excerpt from Individual Student Interview.

Interviewer: So tell me about the rug. When does the teacher use the rug? Does she ever use the rug?

Teacher: yes.

Interviewer: so when you come in the morning, do you go right to the rug and sit down?

Teacher: No.

Interviewer: what do you do first thing?

Teacher: we unpack our stuff, and then we usually go to a Special, like gym.

Interviewer: Right away?

Teacher: yeah. And then after the special, we go to the rug for math. And but not reading

Interviewer: but not reading. So when the teacher works with your group to do the reading and the groups, where do you sit? Does she come to your table where you're working with your group?

Teacher: well sometimes, we sit at the rug, but really not a lot.

Interviewer: but where does the teacher teach your group when you're with the teacher? Maybe there's no place, maybe your group reads on their own, and the teacher never works with you...

Teacher: yeah, sometimes. Like she comes over to us.

Interviewer: so, when you look around your room, is there some special spot in this room—besides the teacher's desk—that you think is all about reading or writing. Like the most special reading or writing spot...

Teacher: umm...for the writing, there's a wall over here.

Interviewer: what's in the box?

Teacher: toys.

Interviewer: do they help you start to think about the words?

Teacher: No.

Interviewer: so do they start ideas?

Teacher: No.

Teacher: well, a writing spot is right next to the calendar. And we write stuff and um...Miss Walker hangs it up here.

Interviewer: so everybody puts the things that are hanging up?

Teacher: Yeah. There's mine!

The second and third interviews were group interviews, and followed a different format. Interviewed in pairs for approximately 30 minutes, the children were told that the researcher was designing a school, and wanted their opinion on how to design the best classroom for learning to read and write. They were given pieces of white paper 9" x 12" and asked to draw their idea of this "best place". The researcher noted what each child drew, and the order in which they did so. Then, the researcher asked each child about his or her drawing, and encouraged them to make a second drawing if he or she had further thoughts.

In *Understanding Children's Drawings*, Malchiodi proposes that when trying to understand a child's artwork, it is important to use a phenomenological approach, which

emphasizes “openness to a variety of meanings, the context in which they were created, and the maker’s way of viewing the world”, rather than basing a study of children’s drawings on preconceptions (Malchiodi, 1998). This approach is sympathetic to the aims of grounded theory, which also asks a researcher to explore without preconceptions. Malchiodi references Betensky, who said, “[the children] are the ones who then experience the process of looking at the self-made phenomenon as it appears to their senses and consciousness. Thus, the artmakers themselves arrive at subjective meanings, not the art therapist” (1998). This study adopted the phenomenological approach, as described by Malchiodi, and let the students’ drawings serve as props to provoke and sustain dialogue with the individual children regarding their feelings about what they had drawn, and what it was that they were trying to communicate in response to the researcher’s request.

The researcher made field notes regarding the order in which the items drawn, although it was, and is, unclear if this would prove to be of value. While the main purpose of the drawing exercise was to elicit answers to the researcher’s questions, the drawings were later analyzed in order to identify any spatial emphases on certain elements whether in size or location in the drawing, the discrete elements that were included, and those things or spaces from their existing classrooms that were absent from the children’s drawings. While the method used by the researcher to note the order of these elements while the student interviews were in process was spontaneous, the notes roughly correspond to the matrix shown in Table 6.

Researcher Notes

Field notes were taken during and immediately after each interview, specifically to identify classroom areas mentioned by teachers during the interviews. The uncoded

photographs were also used for correlation with specific classroom areas and activities mentioned by the teachers. A total of three interviews were conducted for this study, and approximately 30 photographs of each classroom.

Data Analysis

A grounded theory method was used to analyze the interview data.

Analysis of Interviews

The transcribed interviews with the teachers were the first interviews to be analyzed. The transcriptions utilized a horizontal format, which permitted a wide left margin for notation of initial codes. The transcriptions were coded line by line, and key phrases were highlighted as the transcriptions were read and re-read by the researcher. Table 5 gives an example of a teacher interview transcription with initial codes, which are indicated with underlines in the excerpt.

Table 5. Excerpt from group Teacher Interview

Interviewer: so when you work on the rug, how does that work for you? Are you sitting in a chair? The kids are sitting on the rug? Are you standing up? How do you use the area?

Teacher A: I sit on the chair or I'm standing. Writing on the chart, you're standing. You stand. If I'm reading them something, I'm sitting on a chair.

Interviewer: so they're just sitting around?

Teacher B: The rug's used a lot.

Interviewer: and do they stay on the rug? Is there an issue with that?

Teacher B: No, they like it! They have fun. It's just movement. They have, they can't sit in chairs all day, they have to have movement. You have to have them up and around. I can't stay in a chair all day.

Teacher A: and we go over in the beginning of the year how to sit, and... it depends on the class. Maybe sometimes you have assigned seating on the rug, ummm, and you go how should we sit so that everyone has their own personal space?

Interviewer:: so you talk about that...

Teacher B: you have to...

Teacher A: the rugs are small for what we want to do, they're small. They get crowded. You get [one kid] lying across the rug, there's a lot of communication teaching the kids, and a lot of role-playing.

Interviewer:: so, you do have desks? Your own desk?

Teacher A: I never sit at it.

Teacher B: it's for storage, papers, and to be organized, I have a desk. I don't sit at it.

Interviewer:: it's for storage of your personal things?

Teacher B: exactly.

Interviewer: and what kind of papers?

Teacher B: oh, I have my lists, and notices from the office. Notes from parents. My lesson handbook, my gradebook. Attendance information... anything that I really have to... that important to me, I keep there. I have to have one central place where I have my papers that are important.

Interviewer: and the same for you?

Teacher A: pretty much.

Interviewer: you never sit at it?

Teacher B: you never sit at it.

Teacher A: no, pretty much you're constantly moving with teaching. You don't sit too much, you're up, you're down, you're moving

Line by line coding led to initial codes, and these were then grouped into focused codes (Appendix C). The initial codes included the following, which were culled from the interview above.

- In balanced literacy, the teacher moves from place to place
- How the rug is used for balanced literacy
- Controlling children on the rug
- The children's need for personal space
- The children's need for movement
- The teacher needs one central place for organization

- The teacher has a desk
- The desk is used for storage of personal things and administrative papers
- Teachers constantly move in order to teach well

Additional codes from other teacher interviews included those that addressed how the teachers learned to design their classrooms to align with their educational approach to literacy, physical comfort as related to literacy, management issues due to large class size, and issues with storage of books and materials.

The codes that came of the student interviews included:

- the importance of the teacher
- the teacher's desk as a central point
- the need for places to work alone or with others
- the desire to be comfortable while reading and writing
- the positive use of the anchor charts
- the value the students placed on seeing their work displayed
- the importance of the rug area for group meetings

Analysis of student drawings

Four students created drawings of their concepts of the best classroom for reading and writing, in addition to talking with the researcher. These drawings represented rich data, in terms of identifying the elements that the children considered important for learning to read and write, for themselves and for other children. The practice of analyzing children's drawings has generally been used by psychologists to interpret feelings regarding self-identity, sexual abuse, and other topics troubling a child (Malchiodi, 1998). However, little data exists to support the validity of conclusions based on children's artwork, when elicited or analyzed for the purposes of psychological analysis or any other reason.

Analysis of photographs of classrooms

The photographs of the classrooms were next coded. The photographs revealed much of the same information as the interviews, although could not reveal the classroom in use. It was possible to roughly estimate the area of the classroom devoted to the library, and to note the existence and location of the teacher's desk, the location of the anchor charts and student work, the location of technology, and the number of student desks and their arrangement. The photographs were analyzed with regard to the issue of storage of papers and teaching materials. Data collected from observations helped the researcher understand the ways in which the physical elements and spaces of the classroom environment were used by teachers and students.

Analysis of the photographs of the classroom focused on the physical components of the classrooms, including walls, floors, ceiling, lighting; the areas in which literacy activities were displayed; and, the areas in which literacy activities appeared to occur.

Table 6. Sample Matrix for Data Collection from Student Drawings: Items and order of appearance in drawing

Date, Time & Location				
Student	Name/A	Name/B	Name/C	Notes
Object				
Clock	1		1	
Student Desks		3		
Teacher's Desk			2	
Rug	2	1		
Computer Area		2		
Library area	3			
Chalkboard			3	
Anchor Charts				
Bookshelves				
Windows				
Posters				
Other				

Summary of Data Analysis

Grounded theory was used to analyze the data collected through interviews, observations, and documents. Overall, while the data collected were rich, they have not yet reached saturation. For example, unique codes arose in some of the interviews, and more interviews would be needed to be conducted in order to find if such codes were part of larger themes or categories. Additional interviews, observations, and photographs will be required to more fully respond to the research question. The researcher intends to continue the data collection and analysis in research for a dissertation along the same or similar line of inquiry.

FINDINGS

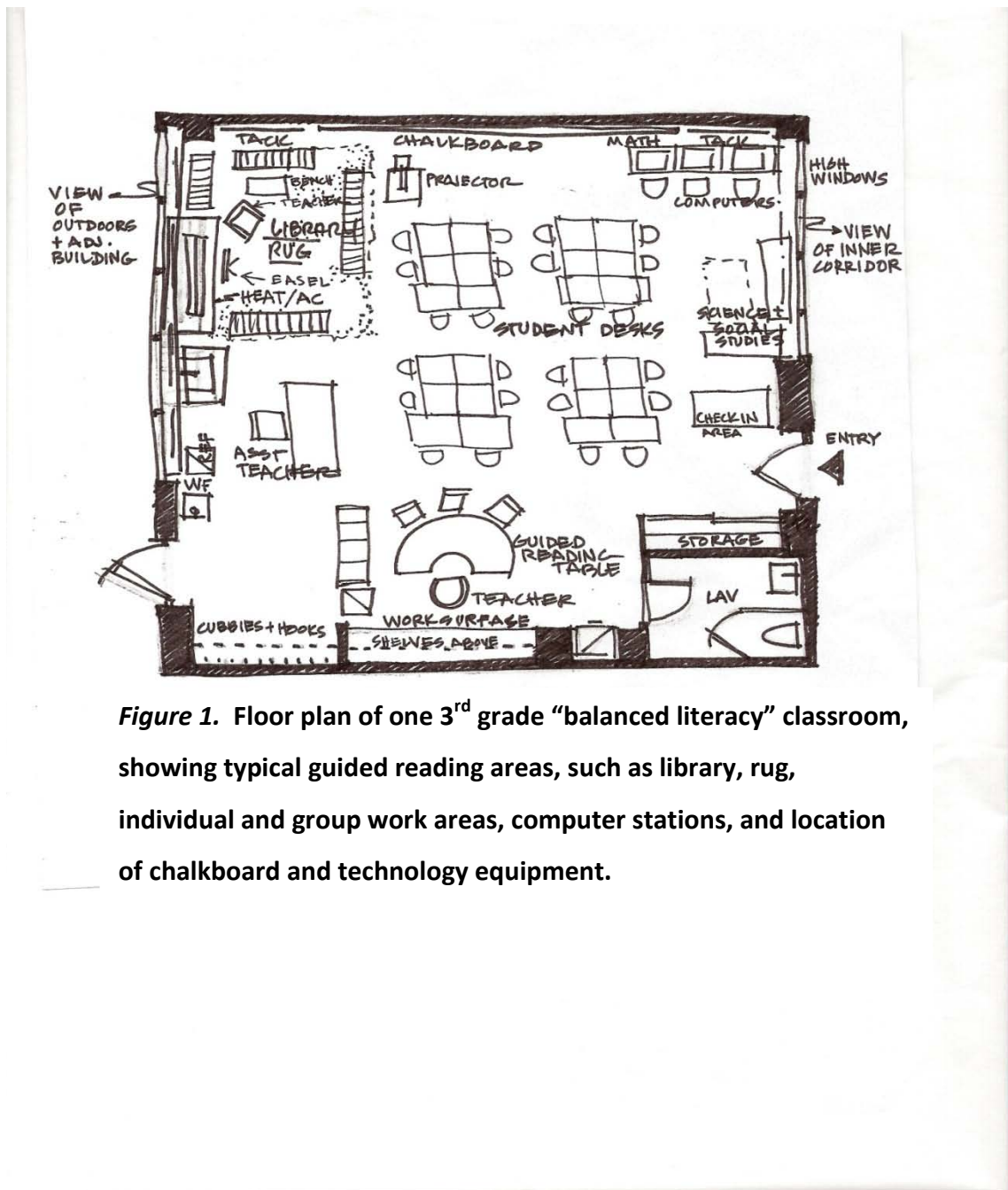


Figure 1. Floor plan of one 3rd grade “balanced literacy” classroom, showing typical guided reading areas, such as library, rug, individual and group work areas, computer stations, and location of chalkboard and technology equipment.

Strong themes arose from the data analysis. While focused codes from the teacher interviews included, “designing the classroom,” “working as a group,” “having a place,” “being organized,” “being comfortable,” “managing technology,” and “valuing independent learning”,

student interviews revealed an awareness of the key *places* that they thought important.

Overlap between the two groups came in two particular themes: that of being comfortable, and in the importance of having different places to read and write alone, or with others.

There was a substantial amount of similarity between the classrooms due to the prescriptive nature of the balanced literacy approach with regard to the design of the physical classroom environment (Fountas & Pinnell, 2001). However, there were clearly identifiable differences between the actual classrooms and the balanced literacy “ideal,” particularly in the freedom of movement of the children, the creation of personal space and separation of work spaces, the use of the walls for display of anchor charts and for student work, the existence and location of the teacher’s desk, the overall sense of organization for independent learning, in the location and emphasis given to the carpeted group area, and the library. (See Table 7)

Table 7. Comparison Chart of Ideal and Actual Balanced Literacy Classrooms.

<p style="text-align: center;"><u>The IDEAL Balanced Literacy Classroom (from Fountas & Pinnell)</u></p> <ul style="list-style-type: none"> • An <i>organized environment</i> supports the learning process. • The classroom is <i>organized for independence</i>. • The classroom is child-centered. • Areas for small-group, partner, and independent work <ul style="list-style-type: none"> ○ Uncrowded ○ Psychological separation of individual work spaces • Quiet areas separated from noisy areas. • Classroom library <ul style="list-style-type: none"> ○ Comfortable seating ○ Posters and charts at eye level
<p style="text-align: center;"><u>AREAS OF OVERLAP</u></p> <ul style="list-style-type: none"> • A large group area for demonstrations and meetings that will develop a sense of community <ul style="list-style-type: none"> ○ Wall display areas for the rich array of print materials that children are producing and reading daily ○ Space for each child's own materials ○ An individual cubby or basket for each child • Guided reading area <ul style="list-style-type: none"> ○ On the floor or at a table in a quiet section of the room ○ Mobile seating or ease of movement for teacher • Print-rich classroom with print at the children's eye level <ul style="list-style-type: none"> ○ Big books in a range of genres; Leveled books for guided reading; A range or library of books for independent reading ○ A word wall ○ A name chart ○ Word charts showing different patterns of word study ○ Published versions of children's independent writing for others to read ○ Alphabet charts and other reference materials ○ Children's personal work and books ○ A message board at the entrance to the room for daily messages ○ Mailboxes for each child • Classroom library <ul style="list-style-type: none"> ○ Carpeted area ○ Other books organized in colorful plastic baskets ○ Browsing boxes • Centers: "physical areas set aside for specific learning purposes" <ul style="list-style-type: none"> ○ Appropriate & adequate materials for independent work ○ Organized and clearly labeled • Storage for children's ongoing and completed work <ul style="list-style-type: none"> ○ Tub for storage of daily writing folders
<ul style="list-style-type: none"> • Areas for small-group, partner, and independent work <ul style="list-style-type: none"> ○ Crowded – 25 children + teacher + TA + push in specialists ○ No psychological separation of individual work spaces • No separation between quiet areas and noisy areas – students seek these themselves • Print-rich classroom with print at the children's eye level <ul style="list-style-type: none"> ○ Word wall occupies too much space ○ Not enough wall surface – teacher must choose between Anchor charts and student work ○ Visually extremely cluttered • Classroom library <ul style="list-style-type: none"> ○ Little comfortable seating – sometimes controlled by teacher 'charts' ○ Posters and charts at all levels around the room ○ Teacher personally purchases all books – not all are fresh and new • Storage <ul style="list-style-type: none"> ○ Teacher must store textbooks and all supplies for entire year in classroom ○ Not enough room for everything

Themes & Sub-themes derived from the Codes

Theme: *the Rug for Group Lessons and Community-Building*

The large rug was identified by five of the teachers as the primary location for the introduction of lessons. However, for three of the teachers, the rug area had greater importance than simply a group lesson area. One teacher described the rug as, “the hub of the room.” It functions to bring the class together, in receiving information from the teacher, in working cooperatively, and in being closely observed by the teacher.



Figure 2. From entry, toward rug.

“Being on the rug...there are so many things that I could use on the rug to help them understand different concepts... and having them be so close to me.....you’re teaching something and having them try it on the rug and that’s a great time for me to listen in on how they’re doing...and to move around quickly and see who’s getting it and who’s not.”

Another stated, “It’s the center of the room... it’s really where the class grows into a community, and not just for the lesson. Otherwise they’re real separate. And this is the spot where they can be in one circle, working together, with you.” From another: “Language arts really encompasses everything: grammar, spelling, phonics, reading... you know, everything. I would consider that literacy, and that’s really I think, in this day and age now, that’s the focus. Making kids become better readers, and they’re not going to want to read unless they have engaging titles, and attractive library.”

Most of the children concurred. Their drawings all included a prominent rug or carpeted area. (See Figure 5) There were two exceptions, however. In the classroom of the most inexperienced teacher, the student reported that the teacher “usually never” used the rug. And in one other classroom, the photographs clearly revealed that the teacher presented group lessons to the children while they were seated at their desks.



Figure 3 . Presenting to the whole class.



Theme: One needs to be comfortable in order to learn.

Sub-Theme: *The classroom furniture and areas for literacy were uncomfortable.*



Figure 4. Hard surfaces to sit on, no comfortable places to work.

The importance of “comfort” arose in many of the teacher interviews. In response to questions regarding where literacy activities occur in the classroom, one teacher not only spoke about clearly identified areas such as student desks, but they specifically mentioned the quality of *comfort*.

“If you think about just ‘normal,’ if you are reading at home...it’s always in a comfortable place...to sit on one of these chairs and try and read, it’s so uncomfortable, and to sit on the floor is not really comfortable...I think having furniture in here that allows you to sit and enjoy the book that you’re in, just go into a different world...we don’t have that here, the luxury.” “...they need to be comfortable, and I think when that happens, then they’re more open to learning. I hope by creating nice areas for them to go to, it would at least kind of give them [choices]. I think that’s important. I think it’s unrealistic at this age that they’re going to come in, sit at that desk, in that chair, for six hours.” Like the teachers, the students valued comfort. In drawing the “best classroom for learning to read and write,” the children, in every drawing, put in beanbag chairs. They were in the brightest colors. In one drawing, the beanbags have completely replaced the student chairs. Each student drawing also shows a rug area. (See Figures 5 and 11)

“They don’t complain,” one teacher said. “We get them up. They can’t sit in these hard molded chairs all day. They adjust, [but] I would like to see more comfortable seating for them...these seats, they’re not cushioned.”

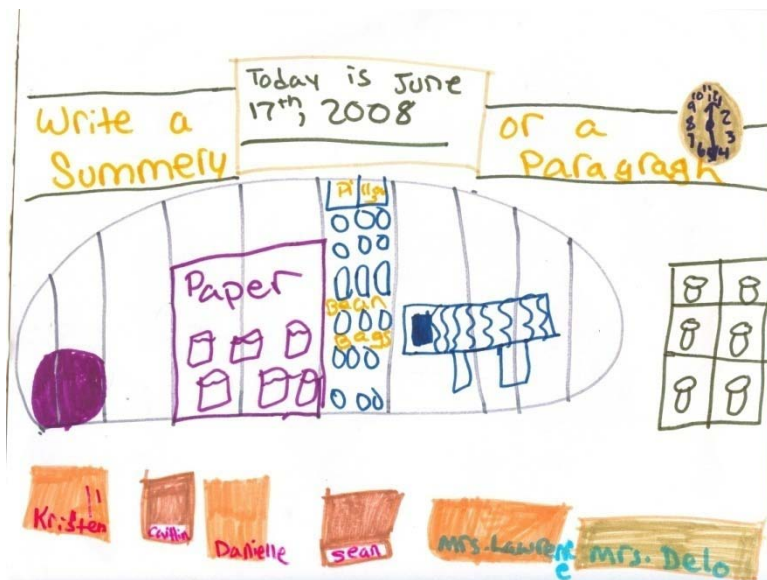


Figure 5. Student drawing: note bean bags, teacher desks, rug (with stripes).

On the other hand, the same teacher named her favorite place in the room: "I have a favorite chair! The comfy one! Ha-ha! It's movable, it's on wheels."

Sub-theme: *No psychological separation of individual work spaces.*

Sub-theme: *Environmental distractions.*

Some teachers were especially critical of the air quality of their classrooms, and its effect on the children's ability to concentrate and learn. "It [the classroom] should be air conditioned...the kids have allergies, they can't concentrate. You're losing your attention. It's amazing how many children are sick with allergies in the spring and fall...so you need a climate, the right climate." From another teacher: "if you want the ideal situation, you want to minimize distractions...You want to get the most positive kind of environment, the most comfortable environment for the children to want to learn...Because there are so many distractions...you

want their total concentration and focus.” Also, “if they [the kids] are not in a comfortable environment, they’re going to be distracted by everything else that’s going on...if the conditions are just not right...you cannot get the kids motivated to learn, and you could be having the most wonderful lesson, and the most engaging lesson, and because of the conditions, it’s very difficult to reach them.” The teacher summed up her feelings about the environmental quality by saying, “You have to make it not only visually comforting, but physically comforting.”

Sub-theme: *the need for movement.*

As in the quote above, comfort was associated not only with softness and hominess, but with the physical movement that the teachers felt children of 9 or 10 years needed. When questioned about the use of the rug, one teacher exclaimed, “They like it! They have fun. It’s just movement... they can’t sit in chairs all day, they have to have movement. You have to have them up and around, / can’t stay in a chair all day!”

Theme: *Areas for small-group, partner, and independent work exist with modified access.*

The classroom is crowded: – 23/25 children + teacher + TA + push in specialists.



Figure 6. Student depiction of her classroom.



Figure 7. Furniture is very close together. There are no private spaces for the children to choose for independent reading and writing.

The teachers were asked where student choose to go to read during independent reading time. “Well...at their seats. Because we’re so pressed...the room is crowded, if you look

around. You'd like some kids to use the rug. But usually that is a minimum number of kids on the rug area, 'cause that is small." With this comment, the limitation that class size placed on the implementation of balanced literacy was clear: children could not be independent within the classroom if there were so many that they needed "management" by the teacher. The researcher did determine that the teacher controlled access to the rug, due to the size of the class.

In a student interview, the child noted that she did most of her independent reading – and most of her reading and writing work, in general, at her desk. Managing locations for the teaching assistant (TA) and the "push-in" specialists meant that teachers directed classroom traffic: "I might say, listen, you take this group over to the rug and do the lesson here, while I work with the rest of the kids....or I'll sit at the table, and they'll have their books, depending on what they're doing, work on the side table, she'll work with them...any available space."



Figure 8 . Areas are close together.

Theme: Children seek private areas to work in.

Sub-theme: *No separation between quiet areas and noisy areas.*



Figure 9. Poor acoustics.



Figure 10. Coat area.

One child, smiling impishly during the interview, told of how he liked to go with his friends and sit under the cubbies and coats in order to find a private place to work. Said his teacher, after confirming that he did indeed go under the hanging coats to work, “So, the other thing I did this year was I added that little rug over there, which is kind of by the computers and

in front of the math center, and I'll find that kids will drift off the blue rug and go over there. They don't want to be with a lot of other kids, lying on the rug, and they just want me or me and my friend, and they'll go over there and they're comfortable, and that I like." During one group interview, the two teachers commented on how children find comfortable spaces to work:

Table 8. Excerpt from Teacher Group Interview, talking about where children like to work.

Teacher D: Any carpet areas, yeah., so they don't have to sit on the floor.

Teacher C: and they are drawn to any area, it can be a low alcove

Teacher B: Exactly. A low corner where they can hide

Teacher C: They love to sit under the computers! I would be scared that that thing would crush me or something, but they like to sit under the tables. They like that alcove feeling, probably because they can hide and do something that they're not supposed to... that's what I would want to do...

Teacher B: I find a lot love this corner here, too.

Teacher C: yeah, it's cozy, it's private...

The need for privacy or quiet spaces to work applies to teachers as well. Said one teacher, "You know, think of the students... you're in the open *all day*, with 20 other people knowing your business, sharing, you know, it's the whole approach, but sometimes you just want time to yourself. I know even as educators, we feel that way"

Theme: *The teacher has a desk, sometimes in a prominent place overseeing the classroom activities.*

In a truly child-centered environment, the teacher would have a place to store her personal items and administrative files, but would not have a desk larger than that of the students, nor would it be placed in a dominant location. In four of the five classrooms

surveyed, the desk not only existed, but was prominently located in three of them, and overflowing with the teacher's papers, notebooks, and personal items. "I have my lists, and notices from the office. Notes from parents. My lesson handbook, my gradebook. Attendance information... anything that I really have to... that is important to me, I keep there. I have to have one central place where I have my papers that are important." This particular teacher had her desk, a large one, located at the rear of the room, in the far corner near the exit to the playground, a key vantage point for surveying the classroom.

One of the group interviews revealed, "Where the teacher doesn't have a desk, it's more child-centered. And it's really their room, so you're not allowed to have your pencils anywhere...get rid of the desk! It's the children's room! ...God forbid you put your purse somewhere..., or need to put your breath mints... that's what so ... you look at my desk, it's not like... there are certain things you just need to have! ...and that's where it came from... get rid of the desk, it's the children's room, blah blah blah!"

Said with humor and not a little irony, this statement revealed that there was a generally unstated conflict between the prescriptions of a balanced literacy classroom, and the needs of the teacher. In the fifth classroom, the teacher claimed to have given up her desk entirely. "I *love* not having a desk! Overall I think it's worked pretty well, and I was very nervous about that. I think it [the desk] was just a place to keep my stuff." Upon closer examination, it is clear that the teacher now uses the table set aside for guided reading as a desk, keeping family photos and personal items at the table corner, and uses the rear surface for her other papers.

The student interviews also revealed that the teacher's desk was important. In Figure 11, the desk is clearly noted, adjacent to the student desks, near the chalkboard, which is the

traditional “front” of the room. One student, when asked to show the interviewer her favorite place for reading and writing in the classroom, immediately hopped over to her teacher’s desk. “This is my favorite spot, because I love my teacher!”



Figure 11 . Student drawing. Teacher’s desk is adjacent to student desks (right) and classroom entry door (left), and close to chalkboard.



Figure 12. Teacher’s desk semi-hidden in corner; needed in order to manage computer projection technology for group lessons.

Figure 13 (below). Teacher’s desk, positioned prominently.



Theme: *Not enough wall surfaces – teacher must choose between display of anchor charts, classroom management posters, and student work.*

Sub-theme: *Word wall occupies too much space that might be better used for other display.*



Figure 14 . Typical classroom “Word Wall”

The word wall was *required* by the one of the school districts, although several other classrooms included it. More importantly, a word wall is prescribed by Fountas & Pinnell (1998). “As the curriculum evolves, and we’re responsible for changes, we look at your room constantly. Five or six years ago, we did not have to have a Word Wall; that wasn’t a requirement, from the district, and now it is. So, that definitely changes. If you look at that board, that’s a lot of space that that Word Wall takes, that you would have other materials, display children’s’ work, it would have been used differently. I think five or six years ago, the room wasn’t as much of a tool as it is now...

Theme: *Print-rich classroom with print at the children’s eye level.*



Figure 15. Typical Classroom entry area: Print-rich. This area is reserved for messages, daily news, and task assignments. It is quite cluttered, although cheerful colors are used.

Each classroom had a large (4' x 12' long) wall-mounted chalkboard, usually flanked by tack boards, with additional tack boards or bulletin boards wall-mounted around the room. The tack boards displayed student work, and classroom management charts. In every classroom, windows were almost completely obstructed by hanging paper charts, called "anchor charts," or student work, creating an intense sensation of enclosure. Large sheets of lined paper, ostensibly from the easel, were hung on the walls around the room; handwritten by the teacher, these were guidelines and reference sheets for specific reading-writing strategies. Nearly every vertical surface was used to display posters or papers.



Figure 16. The walls are covered with student work and posters.

Theme: *Visually extremely cluttered - Posters and charts at all heights*

Anchor charts, which are created by the teacher and students working together in a group, and student work, account for most of the print that was on display on the vertical surfaces of the classrooms studied.

Although these charts are fundamental to implementing balanced literacy, some teachers questioned their usefulness. “the things that you had hanging really should be created by the students. So everything that we’ve done, that’s hanging now, is student-created. ...but I don’t think the kids ever refer to them. But I’m not sure how much they refer to these either. That might be an interesting question to ask the kids, when you interview the kids.” Two other teachers similarly questioned the charts’ usefulness to the students: They [the students] want their work to be hung, they’d rather have that. That’s my philosophy, I’d rather have the kids’ work hanging around the room than *my* charts, my charts are all on the blackboard.”



Figure 17. Anchor charts near library area.

“I find that if there are any kids that really want to go back and look, they’ll use the flip chart and flip it back. They don’t need all these charts hanging. It’s boring to them after awhile. They’d rather finish work and read other kids’ work, then they have communication and discussion, “oh, yeah, I like that book that you read...” etc.”

On the other hand, two teachers felt that the anchor charts were well used by the class. One said, "... we're doing these anchor charts, that's a relatively new thing for me, and I don't know that the kids are referring to them as I thought they would be... and that takes up a lot of space, too, so that's the hanging [papers]" And the other, "So they can create some independence in their learning, and there's a source that they can go to. Cause they need that support still. We can't keep everything in our heads, and they can't be expected to do that either." Her colleague concurred. "That even connects to about the chart... as you were saying. I remember in the beginning of the year when they were making a list of personal narrative ideas, topics they can write about, and there's *no book*, and we made a chart on the chart paper, but I also gave them a notebook so they can refer to it there. They definitely go back and use that."

Figure 18. Close up view of anchor charts (below).

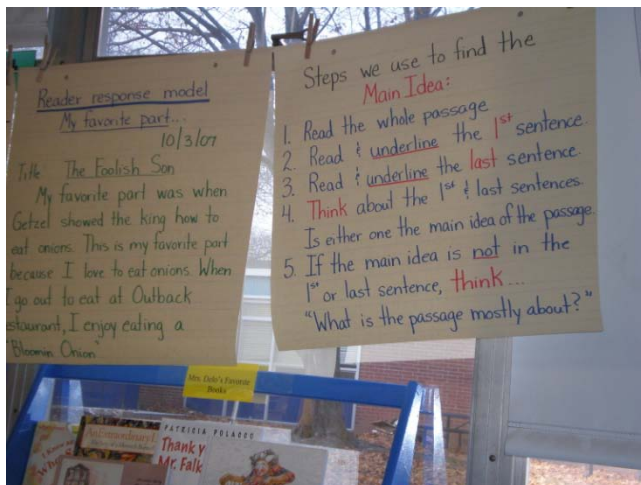




Figure 19 . Windows obscured with anchor charts and student work.

As for the children, four children interviewed affirmed that they consulted the anchor charts. The individual student interviewed liked to work near the “writing wall,” or the wall where the teacher posted the student writing work.

Table 9 . Excerpt from Teacher Interview, discussing reading on the rug, and referring back to anchor charts created there.

Teacher A: Some of them use what’s in the classroom, others don’t, especially the posters, the reading strategies, they don’t refer to that, because when we’re sitting on the rug and talking about a strategy, I’ll refer to it *there*, and then they’ll go back and they’ll go up again and read.

Interviewer: So, that’s useful...

One teacher summed up the ideal role that the library plays in a balanced literacy classroom: “that’s the focus. Making kids become better readers, and they’re not going to want to read unless they have engaging titles, and attractive library.”



Figure 20. Attractive classroom libraries with bins of leveled books.





Figure 21. Another typical balanced literacy classroom library.

Theme: Teacher must store all books and materials for the entire year in the classroom.

Table 10. Excerpt from Teacher Interview, discussing books.

Interviewer: did you buy those books yourself?

Teacher: a lot of them, I did. I get a lot of them, which were bequeathed to me when I came, they came with the classroom, from the teacher that went to third grade that had a bunch of books. Because I started in 2nd grade; and I get a lot of them through the Scholastic book awards. The kids order, I get bonus points, and I buy books for the classroom. ...when the PTA does the bookfair, they're so generous; they give us \$50 to spend...

Interviewer: for each classroom?

Teacher: uh uh. And then it helps, because the books do wear out, I've got some books that are old and the pages are falling out, and we just throw them away, we don't fix them up anymore because they're beyond that, you know, we need to glue the whole binding back.

Sub-theme: there is not enough room for everything.



Figure 22. Supplies stored behind guided reading table, which also functions as the teacher's desk area.

The need for classroom organization and storage space was a major issue. Teachers noted that they are required to store all the teaching supplies for every content area, and for all literacy activities, in their individual classroom. "Storage is an enormous issue. Especially in our wing, there's no place to put anything and you can't be organized...It makes a big difference." There was some built-in storage in each classroom. However, the photos revealed that there were many large and small stacks of paper everywhere. There were many bins and baskets to hold journals, folders, copies; multiple sets of textbooks all around. There were multiple locations for storage of student work, including mail folders, box folders, and individual desks.



Figure 23. Storage of books and teaching materials is a challenge.



Figure 24. Supplies are stored for the curriculum for the entire school year.

Theme: *Knowing how to set up the balanced literacy classroom.*

One of the lessons of their formal teacher training was that each teacher is responsible for arranging the furniture in the room to be in alignment with the educational approach that she was going to be taking in her teaching. “They really wanted an atmosphere that was going to support cooperative teaching and cooperative learning. And you need the children grouped for that.” “Nobody ever talked about setting up the classroom... Everything that I’ve gotten is through people I work with...the district, if they’ve given us conferences to go to or programs put on. And books that I’ve read: about strategies that work, reading with meaning, all those kinds of people really talk about room arrangement.” However, in many ways, their training left teachers to discover ‘on the job’ how to arrange the classrooms and utilize them to implement the curriculum. “They had graph paper,” one said, “and they showed you, ‘here’s your classroom.’ But if you’ve never been IN a classroom, it’s very difficult to put together because you don’t know how the kids will move.” Regarding her training and experience implementing balanced literacy, another teacher said, : It was different because they didn’t have the guided reading philosophy when I was going to school. We went through many philosophies. They had the first, the anthology and that was the whole language still... we went through many different reading programs.

Table 11. Excerpt from Teacher Interview, regarding teacher training..

Interviewer: Did you see, or learn that the classroom needed to be set up differently for different philosophies?

Teacher: I think the more traditional way of teaching is to be, you know, kids in rows. When they went to the cooperative learning model, it was more putting the desks together, having the kids cooperate.

Overall, ongoing professional development is both formal and informal. One teacher said, “Everything that I’ve gotten is through people I work with... the district if they’ve given us extra conferences to go to, or programs to put on... Our principal, Mrs. F. has been a developer in the district for a few years. And books that I’ve read, you know, the latest titles that are out there, you know,”

Summary of Findings

Although there was much agreement in the data collected from student and teacher interviews, and the photographic analysis, there was enough variation in the data to verify that saturation had not been reached. Therefore, the findings may be considered preliminary. All the teachers and school districts sampled in the study embraced balanced literacy to some degree. While there were many similarities, in the use of balanced literacy techniques such as group presentations by the teacher; provision of a carpeted area; creation of a print-rich environment; use of anchor charts; and provision of a classroom library; it seemed, from the analysis of classrooms and interview data, that there were clearly discernible differences in the physical classrooms, in the way that key areas were used, the location of the teacher’s desk, and in the relative ability of students to choose where in the classroom to work; and that these differences might be related to some combination of three factors: the length of the teacher’s classroom experience, the teacher’s commitment to implementing balanced literacy, and the school district’s balanced literacy requirements.

DISCUSSION

The primary research question of this study asked how the physical classroom environment affects literacy outcomes, and looked to the teachers and students for an understanding of this issue. A thorough review of much current literacy theory and research revealed very little information regarding a direct relationship between the layout of the physical environment and learning, although such a relationship is assumed in the guided reading literature. On the other hand, environment-behavior research reveals a nascent body of knowledge with regard to classroom environments and well-being, with studies in indoor air quality, daylight, and acoustics, albeit none directly concerned with the effect of the environment on literacy outcomes.

All the teachers agreed that their training, both during their formal schooling and after, as employees of a school district, had taught them that the design of the classroom should be congruent with the educational paradigm or approach of their district. In the cases studied, that paradigm was Balanced Literacy. The hallmarks of balanced literacy are self-motivated learning, independent learning, a child-centered classroom, and the need for order, organization, and sufficient material – in particular, books. In contrast, the teachers labored to manage large numbers of children, 25 in each case, and to keep them attentive, engaged, and free from distractions for over 6 hours each day; administrative paperwork; sometimes-balky technology; and a paucity of educational supplies, books, and materials as would be needed to fully implement balanced literacy. In addition, the environmental qualities of temperature control, air filtration, acoustics, appropriate lighting, and views of nature were less than adequate in most of the classrooms surveyed. In other words, in order to implement balanced literacy, the

essential tenets of balanced literacy as prescribed by Fountas and Pinnell, and the teachers' own districts, had to be compromised.

The teachers perceived their classrooms as "their" environments, and felt responsible for furnishing and organizing the room to support specific educational methodologies. This attitude conforms to the description of the responsibility of the teacher, but is in conflict with the idea that a balanced literacy classroom belongs to the children. Balanced literacy requires a variety of physical areas within the room to accommodate individual, small group, and whole class; the display of anchor charts, a full leveled library, personal literacy journals, subject textbooks, anthology series', and technology equipment; as well as the more generic classroom elements, such as coat hooks and cubbies, chalkboard, and storage (Fountas & Pinnell, 1996). The teachers felt overwhelmed by the task of keeping the classroom organized, due to the limits of a standard classroom size. The teachers perceived their classrooms as too small for all the materials they had, and found the situation exacerbated by having 25 children in the room. Not having enough physical space affected the organization required to teach literacy: The photographic documents correspond to the teachers' verbalized perceptions, and confirmed them.

In spite of this, the teachers agreed that, in order to support the constructivist concept of independent learning integral to guided reading, the classroom belonged to the children. However, they also felt that the teacher needed a place for her "stuff", or a place just to sit, within the room. This clear dichotomy between educational philosophy and human needs and behavior should be further explored, especially in terms of the implications it has for the implementation of guided reading as prescribed by Fountas and Pinnell. The teachers perceived

the classroom environment as hard and uncomfortable, and saw this as an obstacle to learning. They felt the need to provide comfortable places for the children to work and to read within the room, and accommodated them with carpeted areas.

From a careful reading of the Fountas and Pinnell manuals, the most important quality needed to implement guided literacy was a variety of settings in which the students could work (1996, 2004). In the interviews, the teachers described using the floor, the grouped desks, the semi-circular table, the library, and all the vertical surfaces including tack boards, chalkboard, and window plane for display of anchor charts and student work. Finally, the teachers perceived their classrooms as both *container* and *tool*. It was unclear from the interviews which specific elements of the classroom fell into which category; this itself suggests that the teachers do not see any separation between architectural space formed by the planes—walls, ceiling, floor, windows—of the space, and the furnishings within, such as the furniture or computer equipment. This may be a distinction or definition that the researcher needs to clarify or make before additional interviews occur. The photographic documents reveal no awareness of the ways in which the architectural elements could be used to create or contribute to the desired environmental qualities of organization and physical comfort. For instance, the photographs showed that windows were covered, obstructing natural light; and that the posters and anchor charts that covered the walls and tackboards were at varying heights and of many different sizes. Also, basic principles of design such as color and scale, which can be utilized to create visual order and a sense of comfort, were not in use.

The question, “Do you think that the physical classroom environment affects literacy outcomes?” was never directly asked of the teacher interviewees, which was a defect in the

design of the interview instrument. However, it is possible to make some inferences from the interview data. There are three major elements that both the photographic and interview data analyses revealed through coding—the high value placed on reading and writing, the value of independent learning, and the value of group learning. The anchor charts and handwritten posters were all around the room, allowing a child to visually retrieve notes or guidelines with no problem, at any time. Approximately 50% of wall surface had these posters and charts. There were opportunities for students to write on chalkboards, whiteboards, on chart paper, and in journals, and examples of both teacher and student writing visible everywhere. Independent learning was environmentally facilitated by the location of leveled books on low, easily accessible shelves; paper and writing implements were located centrally on grouped student desks. The central location and size of the large rug gave it importance as a place that the students and teachers assembled to learn together.

One unexpected finding was the large quantity of rich data that was collected in which the teachers spoke about the quality of their personal experience of their classroom environment, and of their sense of responsibility for the managing the physical classroom space, the inhabitants' social space, and the students' learning experiences and outcomes. This rich data has the potential to contribute to the environment-behavior body of knowledge, and warrants further exploration and analysis.

The interview process led the researcher to begin to question the usefulness of the research question. How would it be possible to know through qualitative methods if the classroom environment truly had any impact at all on literacy outcomes? The idea of

“outcomes” implies measurable, quantitative data and analysis, or at the very least, a mixed methods study.

This preliminary research study used only three sources of data: teacher interviews, student interviews, and photographic documentation. Additional observations of the classrooms while in use by the teachers and students, with ethnographic analyses, would yield additional rich data, and greatly contribute to the trustworthiness of the conclusions. Field notes of the classroom observation visits, coded using a grounded theory method, would provide another source of data. For the larger study, the sample of classrooms and interviewees must be more substantial. The researcher’s personal bias requires additional personal reflexivity, and peer review of data.

Going forward, the researcher will use a matrix (See Table 6), relating two factors, to clarify their interrelationship, and the influence of the district’s literacy approach. This may cast some light on the variations in how teachers view the attributes of the “ideal” balanced literacy classroom, and the extent to which such an environment is implemented.

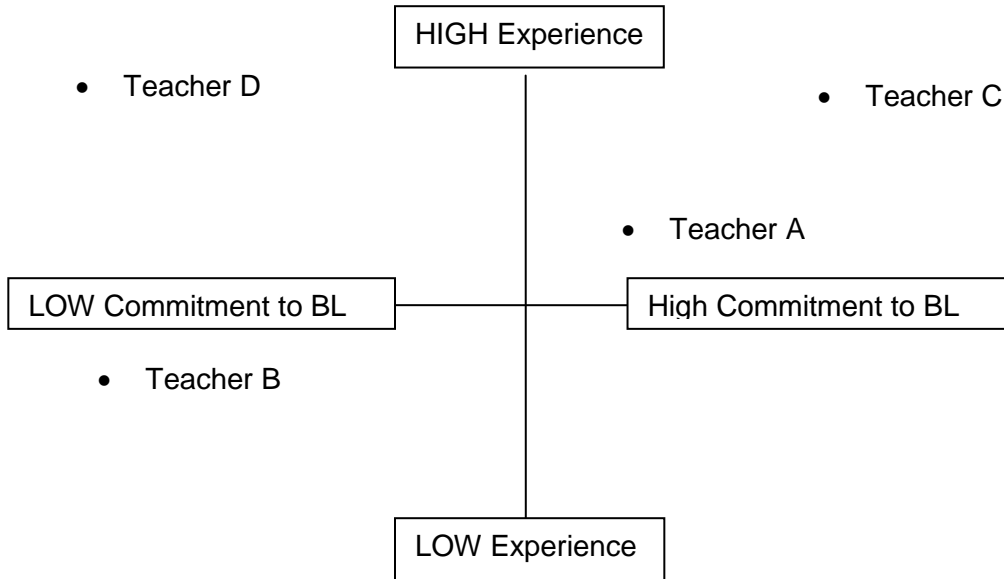


Table 12. Sample plot diagram showing where a given teacher falls on a spectrum of experience and commitment to Balanced Literacy.

IMPLICATIONS

Literacy education underlies every educational activity in the grades below middle school. The findings of this research study contribute to the body of knowledge in environment and behavior, and its existence may more fully enable evidence-based design.

The theoretical underpinning of this study was Interpretivism, specifically symbolic interactionism. The data point to a relationship between the perceived quality of life within the classroom, for students and teachers, and the acquisition of literacy skills. This topic is worthy of being further investigated in the future. The data revealed much untapped information about the “lived experience” of the teachers.

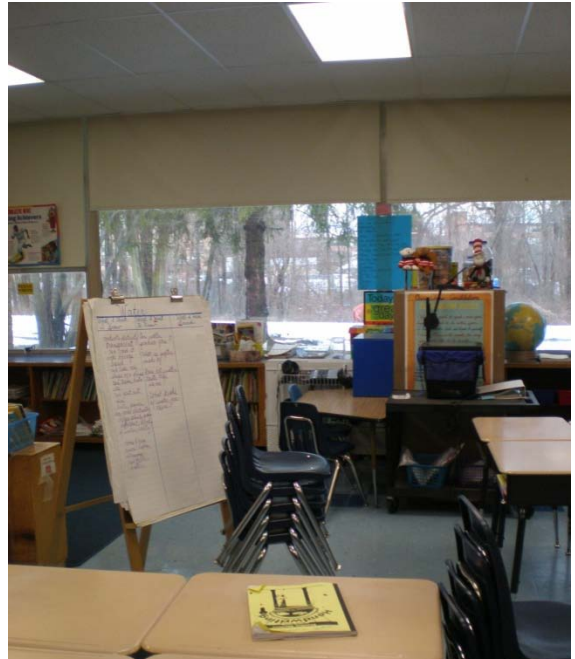
The study has shown that teachers, as a rule, are not formally taught in teacher preparation programs how to apply the basic principles of interior design and space planning in designing their classrooms to align with their educational methodologies. They learn from each other, and from reading books, like those of Fountas and Pinnell, that espouse a particular approach to literacy education and which describe classrooms that “fit” their approach. Although it is clear that balanced literacy has its philosophical roots in British informal education and the open classroom movement of the 1960’s in the U.S., Fountas and Pinnell cite no environment/behavior research to support their prescriptive statements regarding classroom design. If environment-behavior research can demonstrate a meaningful connection between the design of the physical classroom environment and literacy outcomes, then teachers will be able to enhance their literacy approaches with evidence-based design.

APPENDIX A

**Photographs of Three 3rd Grade Classrooms where Balanced Literacy
is Being Implemented**



View of large group work area, toward windows.



Closer view of group work area with chart paper on easel. Note that there is no carpet, but instead there are student chairs.



View of computer area, toward windows.



Chalkboard, with traditional-style cursive alphabet chart above.

Classroom A: Classroom of teacher with 30-years experience.



View of classroom entrance and coat hook area. with student work hanging.



View of Word wall and round table for small group work.



Coat hooks, round small group table, and teacher's desk.

Classroom A: Classroom of teacher with 30-years experience.



View from entrance toward windows. Students work at tables created from grouping desks. Teacher's desk is at far left.



Closer view of windows. Note anchor charts hanging along windows, obscuring them. Student work is displayed from clotheslines on ceiling.



Classroom B: Balanced literacy is inconsistently applied. This teacher is in her first year of teaching. Her classroom has many attributes of a Balanced Literacy curriculum, although they are not necessarily fully utilized.



View of carpeted group work area. Note lined chart paper on easel, and location near chalkboard and technology.



Neat storage of textbooks and other materials.



View of Word Wall and computer area.

Classroom C: Classroom of teacher with long experience and commitment to implementing balanced literacy as much as possible.

APPENDIX B

Informational letter, Informed Consent and Youth Assent Forms

Information Concerning Participation in a Research Study

University of Missouri

(Research Question: How does the physical classroom environment affect literacy outcomes?)

Description of the research and your child's participation

Your child is invited to participate in a research study conducted by Ellen Fisher, a graduate student at the University of Missouri. The purpose of this research is to understand how teachers and students use their classroom for teaching and learning reading, writing, and oral presentation skills, and how they view their classroom. In particular, the study is focused on 3rd grade classrooms, because of the emphasis of language arts in the 3rd grade curriculum.

Your child's participation will involve a short, informal interview with Ellen Fisher. The amount of time required for your participation will be 15 minutes. She may request another interview or a short follow-up conversation.

Risks and discomforts

There are no known risks associated with this research. The interview will take place at your child's school, within his or her classroom.

Potential benefits

This research may help us to understand how the design of the classroom affects the teaching and learning of reading, writing, and other literacy skills. It will be of use to teachers, interior designers, and architects, and will benefit children and educators.

Protection of confidentiality

Everything will be done to protect your child's privacy. Your child's identity will not be revealed in any publication that might result from this study.

Voluntary participation

Your and your child's participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. There is absolutely no penalty of any kind if you decide not to participate or to withdraw from this study.

Contact information

If you have any questions or concerns about this study or if any problems arise, please contact Ellen Fisher of the University of Missouri, at 845-642-3323.. If you have any questions or concerns about your rights as a research participant, please contact the University of Missouri Office of Research at 573-882-9500.

Informed Consent for an Adult Participant

Title of Study: How does the physical classroom environment affect literacy outcomes?

Description of the research your participation

You have been invited to participate in a research study conducted by Ellen Fisher, a graduate student at the University of Missouri. The purpose of this research is to gain a better understanding of how teachers and students use the physical classroom to teach and learn how to read, write, and make oral presentations.

Your participation will involve one or two short interviews with Ellen Fisher, which will last approximately 20-30 minutes. There is the possibility that you will be asked to participate in a third interview.

Risks and discomforts

There are no known risks associated with this research.

Potential benefits

The benefit to you personally will be that you will have contributed to knowledge about how people learn. This research may help us to better understand how adults and children think about the places in which they learn to read and write.

Protection of confidentiality

Your name will not be revealed in any publication that might result from this study.

Voluntary participation

Participation in this research study is voluntary. You may refuse to participate or withdraw from the study at any time. You will not be penalized in any way should you decide not to participate or withdraw from this study.

Contact information

If you have any questions or concerns about this study or if any problems arise, please Ellen Fisher at 845-642-3323. You may also contact the principal of your child's school. If you have any questions or concerns about your rights as a research participant, please contact the University of Missouri Office of Research.

Consent

**I have read this Informed Consent form and have been given the opportunity to ask questions.
I give agree to participate in this study.**

Signature: _____ Date: _____

Name: _____

A copy of this consent form should be given to you.

Parental Permission Form for Participation of a Child in a Research Study

University of Missouri

Title of Study: **How does the physical classroom environment affect literacy outcomes?**

Description of the research and your child's participation

Your child has been invited to participate in a research study conducted by Ellen Fisher, a graduate student at the University of Missouri. The purpose of this research is to gain a better understanding of how teachers and students use the physical classroom to teach and learn how to read and write.

Your child's participation will involve one or two short interviews with Ellen Fisher, which will last approximately 15-20 minutes.

Risks and discomforts

There are no known risks associated with this research.

Potential benefits

The benefit to your child personally will be that he or she will know that they contributed to knowledge about learning. This research may help us to better understand how adults and children think about the places in which they learn to read and write.

Protection of confidentiality

Your child's identity will not be revealed in any publication that might result from this study.

Voluntary participation

Participation in this research study is voluntary. You may refuse to allow your child to participate or withdraw your child from the study at any time. Your child will not be penalized in any way should you decide not to allow your child to participate or withdraw your child from this study.

Contact information: If you have any questions or concerns about this study or if any problems arise, please contact Ellen Fisher at 845-642-3323. You may also contact the principal of your child's school, or the classroom teacher. If you have any questions or concerns about your child's rights as a research participant, please contact the University of Missouri Office of Research.

Consent

I have read this parental permission form and have been given the opportunity to ask questions. I give my permission for my child to participate in this study.

Parent's signature: _____

Date:

Child's Name: _____

A copy of this parental permission form will be given to you.

YOUTH ASSENT FORM TO PARTICIPATE IN A NON-MEDICAL RESEARCH STUDY

RESEARCHER'S NAME: ELLEN FISHER

Study Title: "how does the physical classroom environment affect literacy outcomes?"

This is a study about how teachers and students in a 3rd grade class use their classroom to teach and learn reading, writing, and talking about ideas.

Why YOU are invited

You are invited to be in this study because we want to know more about what kids think about their classrooms, and your teacher thought you'd be a good person for me to talk to.

What will happen?

You will spend a little while, about 15 – 20 minutes, talking with the researcher, Ellen Fisher, about your classroom, and about how you are learning reading and writing.

- There is no right or wrong answer.
- You do not have to answer anything you don't want to answer

Can anything bad happen to me?

- Nothing bad will happen to you, and you don't have to answer the questions if you don't want to, even after we start.

Can anything good happen to me?

- This study won't change anything about your classroom this year. But, we might find out something that will help other children and teachers later. When we're done, I will give you a book to take home and keep.

What if I don't want to do this?

- If you say you do not want to be in the study, you just have to tell me or your teacher. No one will be mad at you. You can also say yes and change your mind later.

Who will know what I say or what my answers are?

- Your answers to these questions are kept secret, unless you tell someone. It's okay to tell.
- We may put the information in a report we are writing,, but it will not have your name in it. No one will know which answers are yours.

Who can I talk to about the study?

You can ask questions any time. You can ask now. You can ask later. You can talk to me or you can talk to someone else, like your teacher or your parent.

Do you have any questions about the study?

Do you want to be in the study?

YES NO Signature of Child _____

Date _____

APPENDIX C

Focused Codes Book

Research Question: How does the physical classroom environment affect literacy outcomes?

Focused Code Book: Codes, Definitions, Examples from Interviews, Photographs, & Notes

OPEN CODE	DEFINITION	EXAMPLE fm TEACHER INTERVIEW	EXAMPLE fm STUDENT INTERVIEWS & Dwgs	EXAMPLE fm DOCUMENT (photos, notes, etc)
Locating lit ed in class-room	Where lit ed occurs in room	<p>A: "...reading and writing, the lessons that are being taught to them, I do it on the rug, and then they go off and read at their seats, or at the rug, wherever they find to be more comfortable."</p> <p>M: "The carpet area is the hub of the room, that's where you're going to do all your reading lessons, and instruction." "...there's a listening center, a writing center..."</p> <p>M: "If you look at that board, that's a lot of space that that Word Wall takes, that you would have other materials, display children's work, it would have been used differently." (NOTE: The Word Wall is a district requirement.)</p> <p>S: Some reading, if we're doing shared reading, modeled reading, where I'm reading and the kids are just listening to me, or they maybe have a book open in front of them of the same text, that all happens at the rug. Then, today, we did it differently, because I needed to use the overhead</p>	<p><i>Kids are chosen by teacher to be in reading groups, and meet in a circle near the teacher's desk.</i></p>	<p>C1: North: large rug, whiteboard, overhead projector, teacher's desk.</p> <p>South: two small carpet areas; library with leveled reading books. Word Wall. 4 computer stations. 5 Groups of 5 student desks near headphone area in East wall.</p> <p>C2: Library and rug area are the same.</p>

		projector. ...today, we're working at the computer....		Kids read at their desks. Teacher uses large semi-circular table for guided reading with small groups or individuals. Child-generated posters are around the room, over the windows
Where kids learn literacy	Where kids practice literacy	Kids read and write on the on the rug, at their desks, and with the teacher at the guided reading table, in both classrooms		C1: listening center, writing center. Student desks. Student journals at desks. C2: Student desks. Student journals stored at chalkboard . Computers are used to write books. Kids work

				together informally
Emphasi s on “library”	Role of library area in guided reading classroom	<p>M: “The whole idea is that a child become an independent learner or reader, and is able to find books on their level and be able to comprehend and do the reading strategies on their own. So that makes a library set up this way..” “...the library has to be organized. Most children are like, “I know where to go in this library.”</p> <p>S: Libraries in a classroom.. you know, kids need to be reading. Language arts really encompasses everything: grammar, spelling, phonics, reading... you know, everything. I would consider that literacy. Making kids become better readers, and they’re not going to want to read unless they have engaging titles, an attractive library...I think it’s important to have so many books in your library, because you have to find what works for each kid. If you’re limited in your library, your offerings are limited.</p>	<p><i>Not emphasized in one classroom.</i></p> <p><i>Student reports going to the school library once a week. However, there are baskets of books. Student reports that they can pick out books from the baskets during special reading time.</i></p>	
The importan ce of the “rug” area	How the Rug is used in literacy ed	<p>A: “Being on the rug...there are so many things that I could use on the rug to help them understand different concepts, going back to the whiteboard, and having them be so close to me.....you’re teaching something and having them try it on the rug and that’s a great time for me to listen in on how they’re doing...and to move around quickly and see who’s getting it and who’s not” “It’s the center of</p>	<p><i>“we sit at the rug, but really not a lot...sometimes she [the teacher] comes over to us. We go to the rug for math, but not reading.”</i></p>	<p>C1: Open group reading area defined by floor rug of the U.S., and view of bright yellow adult rocking chair, and</p>

		<p>the room... M: its really where the class grows into a community, and not just for the lesson. Otherwise they're real separate. And this is the spot where they can be in one circle, working together, with you."</p> <p>"We do a lot on the rug...We use the rug: I'll read to the class. They'll come sit on the rug...just to get them out of their seats. We don't do this all the time...You'll do a mini-lesson [on the rug] and then you'd direct the children back to their seats and the book..."</p> <p>"I like using the rug a lot... Because I can see what they're doing, they're spread out and I can walk down...the rug area"</p>		<p>white-board easel.</p> <p>C2: Rug area and library are same area.</p>
Controlling people on rug	The rug: where people sit, how they pay attention with regard to location; physical control	<p>A: "There aren't as many distractions...[but] there's some 'spread'."</p> <p>S: "...the library...the bookcases really define it, and it keeps the kids...I felt last year, they were literally spilling off the rug. Just having those boundaries keeps them in, and they seem to have plenty of room."</p>		Rug/library, located in a corner, is bounded by bookcases on other two edges.
Integrating/ Using Technology	Where technology is located, , who has access, who	A: "The computer...That's like our connection to everything we need." M: "[a computer for every child] would be wonderful, if we had the space. I just don't know where to put it. That is such a		

	<p>manages equipment, how it is used for lit ed, and how the equipment needs support furniture</p>	<p>lofty dream, that I almost don't even dream it because it's just...the logistics! ...I mean, having laptops, and ...being able to support it, charging them overnight, or having them go home, having them come back"</p> <p>S: Now this year, we haven't gotten to using the classroom computers quite as much...it's hard, because there's only 3 computers, so you can't do it table-wide. When I need to get more kids logging onto the computer, then I'll have to put a schedule up there [on the board]. We've had Alphasmart computers [kids laptops] before, but to get the information off of them is kind of a pain in the neck... the kids can't do that, it becomes a thing for me to do.</p> <p>"We have the plasma screen, which is great...we can google a word in,...get online and look up a word at dictionary.com, and we'll google images...if you want a visual."</p>		
<p>Allocating space to tech equipment</p>	<p>Spatial & furniture requirements of tech</p>	<p>M: "...they spend so much money on technology, but no one said, 'but, the teacher needs a <i>table</i> to put the technology on!'" "Things get launched, and then, it's, 'what am I supposed to do, hold it on my lap?!'" "They didn't think that, okay, we're using this technology, you need a place to store this stuff. You kind of have to have a hub. I mean, you need a place for the projector to</p>		<p>C1: Four computers line the north wall, under the Word Wall, directly opposite to the rug area.</p> <p>C2: the</p>

		<p>project, you need a place for the ELMO, you need a scanner. The scanner can't be on the floor! ...Getting rid of the desk meant that there was no place for that stuff, and no place for the teacher's technology center."</p> <p>S: [computers] take up a lot of room, space. Well, I have two new ones. If I had two other new ones, I could have four. You know what I'd really like—I'd like, you know I have pods of six. I'd like a table that could go over here... but, I don't know, it's something to think about...</p> <p>"It's right up there, dead center in the classroom, but we're hooked up and the computer is hooked directly to it. It's very easy, the way they set it up, it's great."</p>		<p>computers occupy one corner of the classroom, because that is where the power and communication lines enter the room, and it can't be changed. One is old, and two are new machines. They are located to the right of the chalkboard, across the room from the library.</p>
<p>Classroom layout tied to current education philosophy</p>	<p>Educational theory & classroom design</p>	<p>"We went through many philosophies...many different reading programs...I think the more traditional way of teaching is to be...kids in rows. When they went to the cooperative learning model, it was more putting the desks together, having the kids cooperate."</p> <p>On chalkboard use: "I use it for math, a lot of</p>		

		<p>math..." "We have the kids, once again, to get them moving...there's a lot of communication, a lot of visuals, so they see it, they hear it, it's visual, hands-on, so all the multiple intelligences"</p>		
<p>Creating & displaying literacy posters</p>	<p>Literacy posters: physical req'ments, <u>usefulness</u></p>	<p>A: "We [teachers] use them! We use them as teaching tools!" M: [Creating charts with the kids] so they have that idea to refer to...so they can create some independence in their learning and there's a source they can go to. 'Cause they need that support still. We can't keep everything in our heads, and they can't be expected to do that either." A: "That connects to the chart: in the beginning of the year they were making a list of narrative ideas...and there's no book and we made a chart on the chart paper...They definitely go back and use that." "...when we're sitting on the rug, I'll refer to it there, and then they'll go back and they'll go up again and read."</p> <p>S: You know...things that you have hanging really should be created by the students. So everything that we've done, that's hanging now, is student-created...I'm not sure how much they refer to these either. They might be, in their own ways, and I don't know it. If they're not using it, it shouldn't be there.</p>	<p>"We use them. I love the one about 'snippets' (points to the anchor chart which is displayed on a line over the windows)</p> <p><i>"[the charts]... they're just like rules and stuff that we did all together...when I need something, I just look at something up there...it's a good thing, because I don't have a very good memory!"</i></p>	<p>C1: Posters both large and small are located all around the room. There is an easel with lined paper at the teachers rocker on the rug.</p> <p>C2: Posters hang over the windows, covering them. There is an easel with lined paper at the teacher's chair on the rug</p>

<p>Use of floor space</p>	<p>Furniture plan and spatial allocation</p>	<p>M: "The carpet area is the hub of the room, that's where you're going to do all your reading lessons and instruction. A: And again, if you came in my room a few years ago, it was in the reading center, but now the idea is for it to kind of be in the <i>front</i> of the room, because we use that piece, the whiteboard, we use it so much...we're on the carpet as well. M: Everything is on the carpet, and that's where I'm happy." "The whiteboard makes it the front of the room.</p> <p>A: There's a listening center, and a writing center, and the math center...in the corner. There are three separate areas that we can meet on.</p>	<p>There was a group meeting/rug area, but the student reported that the teacher did not use it very much.</p>	<p>C1: 30% of the floor space is allocated to the carpeted areas; 15% is the library.</p> <p>C2: 20% of the floor space is allocated to the rug/library</p>
<p>Using wall space</p>	<p>Use of vertical surfaces and spatial allocation</p>	<p>A: "Trying to find space to put writing posters, reading posters, and I don't have enough sections in the room to devote to that one topic or subject."</p> <p>S: We're doing these anchor charts [posters], that's a relatively new thing for me, and...that takes up a lot of space, too.</p>		
<p>Teacher needing a desk</p>	<p>Treatment of teacher's desk. Conflict between wanting a desk, and the requirements</p>	<p>M: "Where the teacher doesn't have a desk, it's more child-centered. And it's really their room, so you're not allowed to have your pencils anywhere...get rid of the desk! It's the children's room!"</p> <p>S: I <i>love</i> not having a desk! Overall I think it's worked pretty well, and I was very nervous</p>	<p>The teacher's desk was prominent in two of the four children's drawings. In the individual interview, the teacher's desk was the most</p>	<p>C1: the teacher has a very small desk, placed behind a bookcase, holding only personal</p>

	<p>ts of creating a children's place.</p>	<p>about that. I think it [the desk] was just a place to keep my stuff.</p> <p>" I never sit at my desk."</p> <p>"Oh, I have my lists, and notices from the office. Notes from parents. My lesson handbook, my gradebook. Attendance information...anything that I really have to.. that's important to me, I keep there. I have to have one central place where I have my papers that are important." "You never sit at it" "No, pretty much you're constantly moving with teaching.. You don't sit too much, you're up, you're down, you're moving."</p>	<p>important place in the classroom for the student- "<i>[this spot, the teacher's desk] has a lot of pictures...and I love my teacher</i>".</p>	<p>items.</p> <p>C2: teacher has no assigned desk, but uses the guided reading table and back surface for her 'things' including personal items, stacks of papers, collected notebooks. There is another table used by the teaching assistant.</p>
<p>Organization and neatness of "stuff"</p>	<p>Management and storage of lit ed materials</p>	<p>M: "Storage is an enormous issue. Especially in our wing, there's no place to put anything and you can't be organized...It makes a big difference."</p> <p>S: I have a feeling this junk here will become a problem, 'cause I'm gonna need that space, so I think I'm going to have to deal with it sooner rather than later, because I need to get it all cleaned up... so I have the space for the kids...I haven't used it in a group setting, yet...but when I start guided reading groups, I</p>		<p>C2: Piles of paper everywhere. Many bins and baskets to hold journals, folders, copies; sets of books all around.</p>

		think this might be a problem.		
Comfortable-ness of environment	Relative comfort of existing environment; general discussion of need for comfort for lit ed environments	<p>A: "If you think about just 'normal,' if you are reading at home...it's always in a comfortable place...to sit on one of these chairs and try and read, it's so uncomfortable, and to sit on the floor is not really comfortable...I think having furniture in here that allows you to sit and enjoy the book that you're in, just go into a different world...we don't have that here, the luxury."</p> <p>S: I'm happy with the library. I felt that that's worked the best for me. And I think it's comfortable. You know, because they need to be comfortable, and I think when that happens, then they're more open to learning. I hope by creating nice areas for them to go to, it would at least kind of give them [choices]. I think that's important. I think it's unrealistic at this age that they're going to come in, sit at that desk, in that chair, for six hours. I try to vary as much as I can where they're working, and where I'm working, and move them around.</p>	<i>"I'd keep it exactly the same way it is because I like how it is."</i>	<p>C1: teacher has a rocking chair. There are two additional small floor rugs. The windows are almost unobscured.</p> <p>C2: There are floor pillows on the carpeted areas for kids to use. There is a low chair for the teacher. There is a bench for the kids to sit on. The windows are almost hidden by posters.</p>
Need for movement on part of the kids		"They're at the age where they can't sit."		

<p>Needing places for solo, small group, and whole class work</p>	<p>Need for different programmatic areas within classroom</p>	<p>A: "There are three separate areas that we can meet on...there are three teachers in the room, currently. That's another thing that helps you decide your room. If you have support people pushing in to help with the kids...they need a little area to go to. When I'm designing my room, that's something I think about: where can they pull the kids? In other words, some private place where they can work, one on one, or with a smaller group."</p> <p>S: At some point, you need to sit and do some things, or even if it's...by myself or with a child, so you probably would find a place. I wouldn't want to be at <i>their</i> desk, because their desks are grouped in tables, and sometimes you need to have a private moment with a child...and the table setting is too distracting. The other thing I did this year was I added that little rug over there, and I'll find that kids will drift off and go over there.</p>		<p>C1: large rug for group work; student tables in groups of 5-6; small rugs in separate corners for small group work; 4 computers in one area; teacher has semi-circular table for guided reading; technology is near rug & chalkboard /whiteboard</p> <p>C2: rug/library area; student tables in groups of 5-6; 3 computers in one area; teacher has semi-circular table for</p>
<p>Distractions and learning</p>				

				guided reading; technology is at chalkboard , away from rug/library
Other places for kids to work	Kids like places that offer privacy and reduce outside distractions	<p>A: any carpet areas, so they don't have to sit on the floor. M: and they are drawn to any area, it can be a low alcove. A: exactly, a low corner where they can hide. M: they love to sit under the computers! They like to sit under the tables. They like that alcove feeling, probably because they can hide and do something that they're not supposed to ...M: You know, think of the students...you're open <i>all day</i> , with 20 other people knowing your business—it's the whole approach—but sometimes you just want time to yourself.</p> <p>S: I have one little group of boys...and they like to sit over here, with the coats and work, because they're kind of removed and they can talk... and I have kids who are reading really good books and they love to go over to the rug...</p>		
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