

Play in a First Grade Classroom

by

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(Under the direction of Michael J. Pollard)

The specific purposes of this study were to determine: 1) the extent to which various categories of play were evident in a learning centers period in a first grade classroom; 2) whether specific activities and levels of play promoted various social groupings and levels of interaction; 3) whether the teacher's and children's perceptions of the program were similar. Data were collected during a learning centers period in a self-contained first grade classroom (N=20) in southern Alberta. A target child procedure was used to observe individuals in order to record activities and language. Individual behaviours were then coded into task, social, and language categories. As well, interviews with the children and teacher were conducted to obtain information regarding the perceptions of individuals about the program.

In order to analyze the data, frequency tabulations were made of the number of activities contained in the 800 half-minute observation segments. These frequencies were then converted to levels of play in order to determine the range and relative frequencies of the various levels of play.

Further analysis involved grouping social interactions into various play levels in order that trends might be reported. Finally, the field notes from

the interviews were analyzed in terms of themes in order that the perceptions of the teacher and the children might be reported.

The results of the study indicate that approximately 36% of the observed behaviours were considered play and that a significant proportion of the play was of the functional or constructive type. These lower levels of play accounted for the majority of the solitary and parallel social formations.

The results of the study suggest implications for the range and choice of materials and activities which might be used to promote play as well as the role of the teacher in promoting and facilitating play during this structured time.

Index Words: Play, Learning Centers, First Grade, Target Child Observations, Interviews

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Chapter 1 .

Introduction

Purpose .

Play has an integral place in the rhythm of education and has been presented as a way to engage students in learning. There is evidence in the research that play has an important role in a child's learning process. Most of the studies on play have been done in preschool classrooms and the extension of meaningful play activity into the curriculum beyond preschool is an area of current interest to educators. This play aspect of learning is a central part of a child's development and worthy of investigation in other than preschool settings. This study attempted to describe and categorize children's behaviour in the informal setting of a learning centers period in a first grade classroom. The intention was to observe the activity of children and to provide some insights into a process of teaching and learning in a playful environment. The specific purposes of this study were to determine:

1. the extent to which various categories of play were evident in a learning centers period in a first grade classroom.
2. whether specific activities and levels of play promoted various social groupings and levels of interaction.
3. whether the teacher's and children's perceptions of the program were similar.

Toward an Understanding of Play

Whitehead (1929) suggested play as part of a life-long cyclical developmental learning process. He believed that there were three learning stages from infancy to adulthood. The stage of romance encompassed the first twelve years; the stage of precision the next ten years as the students

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mode of expression became more exact and analytical: the stage of generalization marked the entrance into adulthood. Whitehead also believed that a learning cycle for a given individual included aspects of these stages. The romantic stage included the first apprehension of the subject, the vividness, the novelty, and play. It was not a systematic stage because the essence was exploration. It was only beyond this exploration that learning proceeded to a precision stage where there was more exactness in the sense of formulation. Whitehead suggested that this stage was barren without romance. The next stage of learning he described was the generalization stage which included a return to the romantic stage with the addition of classified facts and relevant techniques. In this natural cycle of stages within stages fruits of each were enjoyed and the success engendered at each stage motivated learning. This theory implied a period in learning that wasn't linear and rational.

Another educational theorist, Egan, presented similar cycles of development (Nyberg and Egan, 1981). Egan's stages included the mythic, romantic, philosophic, and ironic and he suggested a cyclical evolution in learning which draws people toward more conscious methods of understanding their lives. The searching, intuitive, romantic, playful aspect of learning was deemed by Egan to be essential, but often overlooked, in elements of our educational system. He concluded that children were often rushed into linear, rational, paper and pencil activities which tended to leave learning barren.

A variety of psychological and sociological constructs have been connected with play. Most investigations of young children's learning through play have been done in the preschool classroom and have focused on different aspects of play. The play experience has been connected with symbolism, development of language, social knowledge, problem solving, coping with anxiety and personal conflicts, creativity, and academic achievement (Christie, 1980).

Because of both the richness and the ambiguity of the concept, it has been difficult to precisely define play. Christie and Johnson (1983) have summarized some of the common elements. These include:

1. behaviour which is intrinsically motivated, spontaneous and self-generated;
2. behaviour which is pleasurable - not serious;
3. behaviour which is variable from child to child and situation to situation;
4. behaviour which is not literal, for example, one that expresses some elements of pretending, fantasy or imagination.

Vandenberg (1982) noted that it was unfortunate that play had eluded a precise operational definition, but that this was not unprecedented in research. The problem with definition might be viewed as similar to other attempts to define such constructs as language, intelligence and creativity. These concepts were not dismissed but rather explored because of the "complexity, subtlety and magic of the phenomenon" (p. 17).

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It was because of the problem with definition that researchers attempted to describe play through "behavioral dispositions that occur in describable and reproducible contexts and which are manifest in a variety of observable behaviors" (Rubin et al., 1983: p. 705). Categories of play behaviours such as those described by Parten (1932), Piaget (1962), and Rubin (1978) allow a focus on particular play behaviours which index social maturity or cognitive growth. These play behaviours were derived from two main categories of play called cognitive (functional or symbolic) and social play (alone or with others). The highest level of play maturity was socio-dramatic play which is persistent and communicative pretense in a group.

Rubin et al. (1983) suggested pretense as responsible for the development of many skills. Vygotsky (1962) theorized that pretense play essentially enabled a child to build up stores of represented meanings necessary for success in learning to read. In play as in language symbols were used in which one thing in reality stood for another in thought. Vygotsky emphasized the importance of this interaction as a stepping stone to inner speech and reflection. Wolfgang (1974) viewed reading as a symbolic activity and found that the child's ability to represent the world with specific signs helped in the development of successful reading in grade one.

Socially, the child is required to develop many sophisticated levels of interaction in order to play with other children. For play to happen children need to know the correct relationship among objects, expected emotions, a

shared knowledge of the play plan and the agreed upon ground rules. They also need to determine the content of the play and their conduct in playing (Garvey, 1977).

Need for the Study

In a review of recent research Christie (1982) explained the value of play and the important contributions of play to children's social and cognitive development. Many studies suggest links between play and creativity, problem-solving, academic achievement, language development, and social knowledge. Play is, therefore, an important aspect of a child's education and play is considered to be a natural medium for learning in early childhood. In our society, however, play is not given much value. Ellis (1968) has stated that most people view play on a continuum from work to play. Most adults see play as non-essential, possibly a waste of time and energy, and because of this not really useful. "This non-utilitarian view of play appears to be reflected in classroom practices in which the limited play is often referred to as *child's work* ... this cultural view holds that learning must result from work." (Green, 1984, pp 18).

With the emphasis on more informal approaches to learning and curriculum development, educators are looking to the success with play in the kindergarten programs for direction. Thus, studying play in a first grade classroom might provide an opportunity to assess play in children who are at a later stage of early childhood and who are in a differently structured environment.

The use of learning centers in early childhood classrooms has been associated with a more informal approach to learning (Cunningham et al., 1977) and one which may promote some of the elements of play (Christie & Johnson, 1983). A learning center is a space within a classroom offering a choice of activities, projects, or materials. Although the purposes of learning centers may vary, they are often used as a way to feature a given theme or topic (Durkin, 1983). In this sense, learning centers might highlight something like creative writing, art, the environment, plasticine, mythology, or communication.

Although learning centers are structured and delimited by the materials and space available, they do offer children choice within those parameters. Children are free to play in terms of promoting spontaneous and self-generated behaviour within this structure. Thus, learning centers appear to be a vehicle for promoting and observing play in a first grade classroom.

Definitions

For the purposes of this study the following definitions were used:

Activity: what a child did, including behaviours such as art, pretend, or manipulation as well as non-play behaviour such as watching or cruising (Sylva et al., 1980).

Cognitive behaviour: a functional or symbolic activity and the concentration and attention to the activity (Sylva et al., 1980).

Social behaviour: the grouping around the target child, including peer, adult, small group or alone (Sylva et al., 1980).

Learning center: a space within the classroom that offered a choice of

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activities, projects, or materials. Each area is designed by the teacher to fit objectives and plans of the unit and to give children the opportunities to approach concepts from different learning strategies and modes.

Interaction: how many times the child spoke or was spoken to, and what was said (Sylva et al., 1980).

Play: an idiosyncratic attraction to a self-contained activity pursued voluntarily by the child for the satisfaction involved in it and without having to get it *right* (Wright, 1985).

Limitations of the Study

The following limitations must be considered in interpreting the results of this study:

1. Observations were done in one first grade classroom in an urban community school. Therefore, results are not generalizable to all grade one classrooms.
2. The subjects were not randomly assigned to the classroom.
3. The study described a self-contained first grade classroom. There was no attempt to manipulate the teaching/learning situation and, therefore, no control over activities, materials, or instructions in the classroom.

Overview

Chapter one contained the introduction and purpose of the study as well as the limitations of the study. A review of literature relevant to this study is presented in Chapter 2. Chapter 3 contains a description of the research methodology including a description of the subjects and instruments used to collect the data. The results are contained in Chapter 4, and a discussion of the findings, conclusions and the implications for further study are in the fifth chapter.

Chapter 2 Literature Review

In this study children were observed in the relatively informal setting of a learning centers period in their classroom. The learning centers period was chosen because it gave the students both the opportunity to choose a variety of activities and materials and to participate in small groups or in a solitary situation. It also provided opportunities for either child-initiated or child-directed activity which allowed them to express their ideas in a variety of ways. The materials were chosen by the teacher to encourage a variety of activities. Research evidence suggests that play activities depend on the child's developmental level, the materials being used, as well as the setting, and a variety of other factors. This literature review will focus on studies which have described the social and cognitive aspects of play and the social interactions of children engaged in play.

This study required a framework for examining grade one play behaviour. It was, therefore, necessary to examine how others have described normative play behaviour and various methods that researchers have developed to observe children. This review presents studies which have focused on categories of play behaviour; methods of observing play; and interaction as an important variable in observing play.

Categories of Play Behaviour

Parten's (1932) study has had an important influence on research in the area of categorizing play. Parten collected data on thirty-four preschoolers between the ages of two and four in an attempt to specifically define play

behaviours. The subjects were white, urban, middle-class Americans who attended nursery school half-days. Parten assumed play was developmental, occurred along social dimensions, and was age-related. The categories she described were: unoccupied, solitary, onlooker, parallel, associative and cooperative play. These categories are still used in some form by current play researchers but Parten's contention that they are age-related is suspect because other studies have found that solitary play, for example, was observable at all age levels. Solitary play is not a sign of social immaturity but is observable in younger and older children. The older children tend to play alone in constructive or educational ways (Moore et al., 1974; Rubin et al., 1976, 1978). As well, other researchers have found Parten's categories of associative and parallel play difficult to distinguish. Rubin (1983) in a study of non-social play in preschool children added observational categories to those of Parten. These included: reading, being read to, and exploration and active conversation with an adult. Barnes (1971) in a replication of Parten's study assessed forty-two preschool children and found that the children tended to be less socially oriented than those in Parten's study. Nevertheless, these general categories described by Parten are still widely used as the basis for categorizing play behaviours.

Another major influence in play research has been the formulation of Piaget's categories of play in relation to his theory of cognitive development, and his hypothesis that play is assimilation (Piaget, 1962). His three main types of play included practice play which was characterized by simple, repetitive activities in the sensory-motor stage of development; symbolic play

which emerged during pre-operational stage of development and games which emerged during the concrete operational stage. Smilansky (1968) developed categories from Piaget's stages of play where she described play as functional, constructive, dramatic and games-with-rules.

Rubin et al. (1978) combined both Parten and Piaget's categories in an examination of preschool and kindergarten children in an attempt to allow a wider range in describing children's play behaviour. The study was designed to examine free-play behaviours of twenty-eight kindergarten and twenty-seven preschool children using a combination of both Parten's and Piaget's scales. All play behaviour was observed in a large classroom in a half-day program. The results supported the conclusion that it is difficult to distinguish associative from co-operative play. The study also brought attention to an awareness of the social-cognitive immaturity of the preschooler which may not have emerged from social categories. Rubin et al. concluded that the combined play scale was a valuable way of categorizing play.

These categories were derived from observing children for one minute periods over consecutive days in which the observation time was relatively short and the category was determined based on strict behavioral definitions of what the children were doing. This categorization of play was closely related to age and seemed to support the view that social participation was indicative of social maturity. This led to an assumption that self, parallel and group play formed a continuum and that particular activities of children could be placed on this continuum. The value of these categories was that

further research could focus on specific behaviours of the more general dispositions and that eventually a more comprehensive definition of play might be constructed. A difficulty with many of these studies was that although they operationalized the vocabulary used in classroom observations, they were based on recording extrinsic behaviour and assumed intrinsic motivation on the part of the child.

Other researchers have investigated play taxonomies through language (Sherrod, Siewert, & Cavallaro, 1984); materials (Wolfgang, 1983); specific categories such as make-believe play (Singer, 1973; Li, 1985); construction play (Zervigon-Hakes, 1984); areas of play (Saracho, 1984); interactions (Hough, Nurss, & Goodson, 1984). These areas have been examined in a variety of ways.

Sherrod, Siewert and Cavallaro (1984) observed twenty-two language delayed children from five different preschools on five different days for ten minute segments for a total of fifty minutes of observation per child. The categories used to describe the play were similar to Rubin's and were based on the premise that mature play became increasingly social or more focused on some activity or object. As well, the more social and focused categories would be indicators of more mature language development. Sherrod et al. suggested that there was some evidence that language delayed children were less mature in development of play patterns than younger, language competent children. The categories included in the study were: proximity to the teacher; proximity to a child; hover-watch; solitary-occupied; solitary-

unoccupied; group-object play; group-motor play; group-object contact; thematic play and verbalization-peer. The categories added the dimension of interaction to Rubin's categories and suggested a format for studying the flow of interactions.

Wolfgang (1983) used play materials as an indicator of the child's social-emotional development. An attempt was made to determine a relationship between play preferences and cognitive competence in order to predict social-emotional adjustments. The study was weak in that some play materials couldn't be properly measured but it was a useful study in that it suggested play materials for different stages of play or play therapy sessions. The activities in this study were described as a continuum from sand play, finger painting, easel painting to clay modelling, drawing, carpentry, blocks to lego and puzzles. The continuum was described as a progression from fluid sensori-motor to structured work-like materials.

Singer (1973) developed a scale of imaginativeness in an attempt to define one area of play more specifically. The categories described were from being extremely unimaginative in play through fleeting pretend elements, moderate amounts of pretend play, to spontaneous creations of make-believe situations to high originality. This five point system was also used by Li (1985) in observing pretend or the as if element of play in fifty-nine preschool children in a free play period. Li used ten minute sample observations and a forty-five minute video taped session which focused on small groups of children. In combination with Singer's categories she

included: put on costumes; use props in natural functions; use props in pretend functions; pretend actions; verbalization in make-believe context; and pretend roles. Make-believe play represented a certain stage of growth as well as a potential environment for the development of cognitive ability.

Stages of development were described through construction play by Zervigon-Hakes (1984). The stages were divided into two categories; material mastery and symbolic development. Material mastery included four categories: sensori-motor, basic forms, combinations and designs. Symbolic development included occasional naming, transient naming and simple images. The stages were linked to the involvement children display with materials that were available to them.

Saracho (1984) developed a play rating scale within preschool settings with two different samples of 300 children and 2,400 children. She identified play as physical play, block play, manipulative play and dramatic play. Within each category she noted creativity, ability to communicate ideas, levels of social participation and their capacity for leadership. The scale consisted of the four areas of play and four types of behaviour marked on a five point Likert scale. Saracho developed what seemed to be a simple efficient scale based on a hierarchy of developmental skills.

In a study of children in day care Hough, Nurss and Goodson (1984), focused on the frequency of adult and child roles and their interactions through observations of the nature of the relationship, language used and

play activities in which the subjects were engaged. The data were collected on a checklist which gave the context of the activity such as outdoor play, eating, group time, and free play, and the behavior variables such as language, autonomy, co-operation and involvement. The items were marked every thirty seconds for a period of five minutes.

Summary

Researchers seem to agree on ways of categorizing play and have tended to use aspects of behavior as a way of classifying play. These behaviours are frequently described on a continuum from simple to complex. Complex play behaviours, such as socio-dramatic play, involve the child more fully and seem to demand more from the child in ability. These include such things as the complexity of the language, understanding, and planning ability. Categorizing play in this way is useful but is not inclusive because it assumes an intrinsic behaviour from an extrinsic observation. Nevertheless the research suggests that categories are a useful tool in describing aspects of play. Being aware of such variables as age, social grouping, and activity in observing a play situation may assist the observer in accurately describing the situation.

In observing play in a first grade classroom the use of various categories provides a framework for describing the child's activity. The categorization of these activities might allow play to be described on a continuum from the simple, functional level to more sophisticated levels.

Methods of Observation

Several different methods of observing children have been used by various researchers. Some techniques for observing children were based on the *focal animal* technique originally developed by ethnologists to gather information on ways that animals adapt to their environment (Altmann, 1974). This method was used successfully by Goodall (1976) in her observations of apes in their natural environment. The method allowed the development of a profile of individuals in different routines. When the profiles were combined, a description of typical behavior of a class of animals was possible.

Sylva et al. (1980) used the *target child* technique in a way similar to Goodall in a study of 120 preschool children. In their study each child was observed for twenty minutes. The foci of the observations were on the child's task, with whom the child was involved, what was said and the materials being used. The behaviours were observed for twenty minute segments. Sequence of activity and duration of involvement were noted. Observational notes were also made before and after data collection to capture initial and concluding activities. Sylva et al. concluded that their method of sampling and interpreting behaviour was effective in describing children's engagement with play.

The initial reason for the research was to study a specific cognitive aspect of play which Sylva et al. described as concentration, that is, the materials, events and interactions that helped sustain attention to some

action or event. The study also explored some of the effects of various activities on children's actions, talk and social relationships. The intent in this part of the study was to focus on what was challenging to the students and what produced rich play and engaged the student to the fullest capacities. What social situations bring out the best in children? Included among their conclusions were that children were intellectually challenged by materials that have clear goals and a means for achieving them. Feedback in a form that allowed children to monitor their own progress was also an important consideration. They noted that sustained conversation in preschool was rare. Of 9,600 half minute periods only 20% contained conversation which they defined as a three element exchange on a single topic. Richer dialogue seemed to require more intimate and continuous settings than the subjects in this study were provided. Pretend play which had the distinguishing quality of richly elaborated play and rich connected talk.

A similar study was conducted by Tizard, Philips and Plewis (1975) in order to estimate the intellectual level of children's play. The subjects were 109 children from twelve preschool centers. Observations were done in a *free play* format. The children's play was assessed by the use of ten minute time samples at half minute intervals. The observations recorded what the child did and said and what was said to them by the staff and others. The observations were coded ex post facto. A coding system based on a modified Parten scale was used. Scores were derived for solitary, parallel, and associative play categories. Onlooker and unoccupied incidences were coded as non-play. The purpose of the study was to refine and develop measures

to assess cognitive aspects of play. There were indications that cognitive functioning was age related. The authors found that the older children tended to be more involved in symbolic and social play than the younger children. They talked more and were more involved in co-operative role-playing situations. A weakness of the study was the moderate observer reliability measures. Observer reliability might have been enhanced by the use of video tape. However, video-taping of the observations was not done because of the many technical problems associated with a free flow, free-play indoor and outdoor situation.

Roper and Hinde (1978) used a similar method in collecting data on the social interactions of sixty-seven children during play. They recorded the behaviours within a shorter period of time. Each child was observed for five seconds at a time. This method sacrificed both the sequence and the duration of the play, but gave an overview of activities in the classroom. Each observation recorded information about what the child was doing, the child's two nearest neighbors, and the occurrence of verbal communication. The staff's verbal communications and their nearest neighbours' were also recorded. Was solitary play seen as immaturity or as independence and maturity? Playing alone does not necessarily mean the child is lacking social ability. It may simply mean that the child has confidence to play alone. Roper and Hinde concluded that social participation should at least be described in terms of both group composition and interaction with a category to describe solitary play.

Summary

These techniques describe ways of observing which respect the natural environment of the classroom. This method of collecting data freezes the children and the activity in time and gives the observer the opportunity to view what is happening in a more systematic way. This approach has its roots in the scientific investigation of animals in their natural environments. Such naturalistic approaches to observation are based on the assumption that the classroom be kept as *natural* as possible while gathering information about the children participating in their activities. It allows the recording of descriptive detail to be gathered with minimal disruption to the routine of the classroom. It does not focus on a child's thoughts, intentions or feelings.

Interaction in Play

There are a number of variables associated with play which seem to encourage and enrich both the activity and the level of involvement in the play. Most important among these seems to be the interaction with others. Researchers have used various approaches to study its influence.

Carpenter and Huston-Stein (1980) in a naturalistic observation in preschool classrooms investigated the influence of activity structure on sex-typed behaviour. Five preschool classrooms (N=85) were observed for one semester. The researchers hypothesized that low structure taught children the skill of creating a personal structure. The amount of verbal feedback received from an adult, the activity in which the target child was engaged, and child behaviours were observed. The observations were done for four minutes per child per week for a total of sixty-two minutes during a free-

play period: They alternated between boys and girls. The activity and not the individual child was the unit of analysis for defining the structure level of activities. The activity structure was examined to see if differences in participation and behaviour of these preschool age children were sex-related. The girls, as predicted, spent more time in highly structured activities and the boys spent more time in lowly structured activities. The amount of adult suggestion, instruction or modelling is what differentiated the various structures in the study. The findings support the hypothesis that children learn different skills by participating in activities within different structures.

Garvey (1974) grouped thirty-six children into dyads and allowed each dyad to interact. The purpose of the study was to describe the structure of spontaneous episodes of dyadic play. The children were video-taped in fifteen to twenty minute sessions in a well-furnished playroom. They were all from middle-class, professional families. The tapes were transcribed by two investigators who independently identified the social play episodes. Garvey reported that sixty-six percent of each session was spent in focused interaction with an average density of one speech utterance every four seconds. Recurring patterns of interaction were observed in the play episodes of the dyads and these were examined in terms of turns and sequences. Garvey concluded that three abilities underlie social play: the ability to distinguish play from non-play; the ability to abstract the organizing rule; and the ability to identify the theme. Social non-play centered around discussions about teacher or other children and television.

Dunn and Dale (1984) investigated the difference in initiation and thematic content in pretend play. The study included twenty families with siblings of an average age of two and five years old. All the families were white. The observations were made in the home, and the observer carried a tape recorder to capture family and children's speech. The observations were based on three one-hour sessions in which a narrative record of the play was recorded in fifteen second segments. The authors concluded that children as young as twenty-four months take part in joint pretend play with a sibling. They suggested that the interpersonal relationship and the quality of that relationship played a part in the ability to play. The experience and gender of the older sibling influenced the shared role play.

The foregoing studies show the importance of peer and adult participation with children in developing and expanding play behaviours. Other studies have shown the effect of peer interaction on children. Abramovitch et al. (1986) in a longitudinal study demonstrated the importance of general patterning interaction between siblings and peers. The subjects were twenty-four pairs of same-sexed siblings and twenty-four mixed-sex siblings and the nineteen peer subjects were same-sexed, same age best friends. Each dyad was observed for one hour, and each session was tape recorded. Observers recorded both verbal and non-verbal behaviours and coded these behaviors as either pro-social or non-social. Only initiations of interactions and not ongoing interactions were recorded. The observations were analysed in three parts including sibling observations, longitudinal analysis across three observation times, and peer observations either alone or

compared to sibling data. The findings showed that the older sibling had a dominant role in interactions and the age interval between siblings was not significant. There was no evidence that sibling interactions carried over to peer interactions, yet there were several trends indicating that both older and younger siblings were more pro-social and playful with peers. The visiting peer was less dominant in interactions and older and younger peer dyads did not differ in levels of interaction.

A study by Light and Glachen (1985) examined facilitation of problem solving through peer interaction. The subjects were two complete classes of three, seven and eight year olds and thirty-four, twelve and thirteen year olds, from an inner urban school. The design entailed an individual pre-test session, a paired or training session and a post test. The experiment involved a computer game called *Logic 5* which generated high levels of interaction. The children were randomly allocated to paired or individual work. In the pairs, both children had to agree on an answer, and each took turns making entries. All sessions were video-taped. The conversations were transcribed for analysis. In a second experiment a new version of the game allowed a pre-test. The hypothesis was that the conflict and having to defend a point of view increased the level of performance in the task. A general conclusion suggested by the study was that working in pairs helped individual problem-solving performances, and that this applied to different age levels.

Summary

Interaction, that is participation with another individual, is an important variable in play. It seems to encourage and develop play. Researchers suggest, therefore, that it is important to record interactions with others as part of gathering data about play because it influences the nature and the extent of the play. Researchers agree that this aspect of play should include records of the interactions of child with child or child with adult as they participate in activities together.

Summary

The differences in child's play and in the interaction and influences of others on play behaviour lend some support to Vygotsky's argument that activities conducted with assistance enable children to achieve more than they might on their own. The literature reviewed supports the contention that play occurs in identifiable categories which form a continuum from simple to more sophisticated. The basis for these categories include both cognitive skills and various social structures exhibited during play. Many studies have looked at children in natural settings to obtain a clearer picture of the interrelatedness of their development. There is also support for the proposition that interactions facilitate play and may make explicit the social and cognitive activity that constitutes the play. Describing selected play activity may be helpful in determining some of the patterns used by children in learning.

Chapter 3 Procedures

The purpose of this study was to describe and categorize the play activity in a learning centers period in a grade one classroom. This chapter contains a description of the context for the study, the instruments used to gather data, and the treatment of the data.

Context for the Study

In considering procedures to be used in the study, a variety of methods of observation were considered. These included laboratory observation, continuous observation commentaries, whole class spot checks, whole day activity records, and target child sampling. The target child approach (Sylva et al., 1980) was considered the most appropriate for this study because it enabled observations to be made of the phenomenon of play in a naturalistic way. As well, the approach permitted sampling behaviour for a specified length of time on a specific child. This aspect of the approach allowed the researcher to elaborate a series of descriptive episodes of behaviour for all subjects over time. It was assumed that such episodes when combined and categorized would provide a representative view of play during this learning centers class period.

The decision to classify observed behaviours according to task and interaction patterns was based on the evidence in a number of studies that these variables were important in considering the levels of play in which subjects might be engaged. Additional considerations in choosing the observational approach were the suitability of the instruments for use in a

classroom setting as well as the need to avoid the apparent limitation of attempting to observe using predetermined categories of behaviour.

The classroom was chosen because the teacher had decided to initiate the use of learning centers with her first grade students. She had been involved in a previous study with the researcher, had an understanding of the proposed study, and had an interest in collecting data in her classroom for the language program that she had initiated.

The classroom was a mobile attached to the main part of the school. The desks were arranged in horseshoe groupings of four to six facing the long side of the classroom. There was one window and one door. The rest of the walls had displays of the theme -- charts of words, songs, things to do, weather and calendar, displays of children's art work and stories, displays of objects children had gathered on the theme. The learning centers were placed on the tables around the room or in boxes to be carried to a group area. There were no worksheets during this learning centers period.

The classroom included twenty-six children. Twenty of the children (eight girls and twelve boys) were used in the study. Six students were eliminated from the study at the request of their parents. Thirteen of the children were aged six and seven were aged seven. The classroom was located in a community school of mainly middle-class families in southern Alberta. It was one of three classrooms to which first grade children were assigned.

A pilot project was initiated to test the instruments that were to be used in the study and to familiarize the children with the observational process. The teacher was involved in the process of deciding how the data might be gathered. A number of suggestions were made. The video-tape approach was rejected by the teacher. She had tried video-taping in her classroom and found the children appeared to be adversely affected by the camera. Other researchers (Sylva et al., 1980, and Roper & Hinde, 1978), made similar decisions based on the observed effect of the video cameras on the natural setting of the classroom. As well, the classroom was very crowded. The audio tape recorder was also suggested and tried. The extraneous noise in the classroom made it difficult to hear interactions involving the target child. Thus, both of these strategies were rejected.

It was agreed that manually recorded field notes would be the most appropriate method for gathering data. A pilot observation was conducted to verify the appropriateness of the procedures. As a result of the pilot the instrument and method of collecting data was considered to be appropriate for the needs of the study, acceptable to the classroom teacher and not too disruptive to the classroom routine.

Instruments

A time sampling sheet (see Figure 1) marked with half minute sections was used to record activities and language. Two sheets were required for each ten minute segment of observation. The behaviours were coded later in three categories: task code, social code, and language or social interaction code.

CHILD'S INITIALS: <i>R</i> SEX: <i>M</i> AGE:		DATE AND TIME OBSERVED: <i>May 2/84</i>	
ACTIVITY RECORD	LANGUAGE RECORD	TASK	SOCIAL
1. T.C. sits at table with 2 other girls with plasticine. They have a pile of plasticine that they take bits off.	<i>Chatty</i> talk about babies	SIMP	SG
2. They are making babies with the plasticine.	TC → CS map lth C → CS 3 babies TC → CS Theres die down one after each other C → TC If you stay for	Art	SG
3. Pencils playing between her fingers making + softening.	3 night you get 4 babies - see her - breast feeding	MAN	SG
4. Continues to pencil & play with plasticine puts it near her mouth.	- talk of babies & when they are born	MAN	SG
5. Stretches the plasticine & twists it between her fingers.	TC → I'm in that my brother got married & had a baby. C → TC my mummy is	MAN	SG
6. picks up & moves the plasticine not making anything.	going to have a baby I will be a step sister. TC → C a step sister	MAN	SG
7. Turns & talks to a neighbor who shows her what he was thinking.	TC → C what can we make with it? C → TC a plunger.	MAN	SG
8. moves & twists the plasticine.	TC → CS I was born in B. C → TC I was born in Calgary.	MAN	SG
9. plays with the plasticine talks to brother.	TC → I was not kidding I was born on doll bridge TC → In the general hospital	MAN	SG
10. "	C → TC So was I " " So was I C → TC you were both in the hospital room - was I? C → TC how did you know C → TC I know...	MAN	SG

Figure 1. Sample of a completed time sampling sheet

For each half-minute segment on the time sampling sheet what the child did was recorded in the Activity Record column. For example, *TC at a table with 3 girls. They have a big ball of plasticine and are taking bits off.* As well, the child's language and what was said to him/her by other children was recorded in the Language Record column. For example, *TC→C Let's make babies. C→TC Let's make three.* The following abbreviations were used to record interactions:

TC	target child
C	Child
A	Adult
→	Who was speaking.

A total of ten minutes of observation were recorded for each child at each session. Once the observations were completed the records were coded according to both a social code and a task code. The task code included such behaviours as pretend, art and manipulation and such non-play behaviours as cruising or watching. In recording the social composition and tasks, the following abbreviations were used:

SOL	solitary
PAIR	Two people together (target child plus one either child or adult)
SG	In a small group of three to five children

- LG In a large group of six or more children
- /P Parallel (the child is playing in a group with little contact with others around him).
- O Put a circle around the social code if the child is interacting with, or is very near to, an adult.

The following abbreviations were used to record the tasks:

(ART) Art *free expression* creative activities such as painting, drawing, chalking, cutting, sticking.

(MAN) Manipulation

The mastering or refining of manual skills requiring coordination of hand/arm and the senses: eg., handling sand, dough, clay, water, etc. Also sewing, gardening, arranging and sorting objects.

(3R's) Three R's Activities

Attempts at reading, writing or counting. includes attentive looking at books.

(PS) Problem-solving

The child solves a *problem* in a purposeful way using logical reasoning, eg., looking to see why something won't work and then repairing it.

(PRE) Pretend

The transformation of everyday objects, people or events so that their *meaning* takes precedence over *reality*.

(GWR) Games with rules

Includes ball games, skittles, circle games including singing games, and board games.

(SI) Social interaction

Social interaction with another child or with an adult, eg., chatting, borrowing, seeking or giving information, teasing, being cuddled.

- (SA/AWG) Standing around, aimless wander or gaze
The child is not actively engaged in a task or watching a specific event.
- (CR) Cruise Active movement around from one thing to another, or purposeful looking around, when a child appears to be searching for something to do.
- (PM) Purposeful movement
Purposeful movement towards an object, person or place, eg., searching for an object, crossing the room to another activity.
- (W) Wait The child's time of inactivity while waiting, for adult or child.
- (WA) Watching Watching other people or events. The child may watch a specific person or activity or look around in general.
- (DA) Domestic activity
Includes going to the toilet, hand-washing, dressing, rest, tidying-up, etc.

Data Collection

In order to observe the twenty children, target children were selected from the class list for each learning centers period. Although the number varied because of time and space constraints, as many as four and as few as two children might be observed during the one class period. Each child was then observed for ten minutes during the learning centers session. Each of the children was observed twice using this sampling without replacement procedure. The observations were conducted during a six week period in April and May, 1986.

Twenty children were observed for twenty minutes each resulting in a total of 800 half-minute observation segments. The children were observed during a learning centers period that was part of the language arts program. The period ranged from one-half hour to forty-five minutes daily immediately before lunch. The children went into the informal structure after either a gym class or a large group activity such as story time or a mathematics period. The teacher made an announcement that it was learning centers time. She then went over the concept of making wise choices when selecting activities and reminded the children to be aware of the noise level of the classroom. The choices available to the children were reading corner with library books, listening center with tapes and matching books, a variety of games, publishing house (story writing), plasticine, water table, art projects, and a variety of activity cards with theme related activities.

The teacher initially spent considerable time with the children initiating them to the procedures to be used during this learning centers time. She began with single activities as a way of familiarizing students with the process. She then expanded the number of activities so that all of the students would experience some choice in deciding upon an activity. There were always more activities available than the maximum number of children permitted as the limit for those activities.

The constraints placed upon the children were those of number, space, and time. There were limits to the number of children who might pursue a particular activity at a given time. Although choice was always available.

the size of the classroom limited the number and range of activities.

Once the centers had been established, the teacher was generally non-directive in her approach. Other than reminders about courtesies toward others, and other similar management interventions, little direction was given to the children. This non-directive approach to the centers time was maintained throughout the observation sessions.

The teacher was trained by the researcher during the pilot project. A summary of the Sylva study (Sylva et al., 1980) and copies of the observation sheets were given to the teacher. A child was chosen and both the teacher and researcher focused on the same aspect of the observation sheet. Each section of the instrument was used, checked and scored. Then a formal observation was done by both observers.

The observations were recorded on the sampling sheet (see Figure 1) and every eighth observation was done by the teacher as a check. The teacher observed the same child as the observer for a ten minute period, and then each segment of cognitive and social activity was matched with the observer's recorded sampling. The teacher recorded the same child as the observer and the results were compared. The coding was verified by an independent coder according to the task and social grouping of the children. The independent coder was given a set of guidelines and the recorded sampling sheets and asked to code the cognitive and social activities. The observer's coding and the independent coding achieved 90% correspondence.

Observational notes were also made with reference to general activities of the class, group and individual child.

An interview with the children was also conducted at a separate time from the observations but during a center period to ask them for their opinions and insights about what they were doing and to capture their thoughts and feelings about learning centers as part of the program. The following questions were asked:

1. Do you like the learning center period?
2. What do you learn in learning centers period?
3. Would you like to have more times in the classroom day that are like learning centers?
4. What do you like to play with in learning centers?

The teacher was also interviewed to understand how she planned the centers and activities and what she hoped the children would gain from the learning centers time. She was asked the following questions:

1. How did you start using learning centers in your classroom?
2. Why did you start with learning centers?
3. What is it that encourages you to continue to use this format?
4. How does this fit with your philosophy about teaching?
5. Can you describe the process that you used in setting-up this informal method of teaching?
6. Define play.
7. How do children benefit through play?
8. What is the underlying structure of the learning centers period?

9. How do children benefit through play?
10. How do you justify interaction and play in your classroom?
11. Would you continue to use this format for teaching in a grade one class?
12. How does language and social interaction fit in with your teaching?
13. Do you involve the parents?

Treatment of the Data

In order to analyze the data, frequency tabulations were made of the number of activities contained in the 300 half-minute segments. These frequencies were then converted to levels of play in order to determine the range and relative frequencies of the various levels of play.

Further analysis involved grouping social interactions into various play levels in order that trends might be reported. Finally, the field notes from the interviews were analyzed in terms of themes in order that the perceptions of the teacher and the children might be reported.

Chapter 4 Results and Discussion

Categories of Play

The first purpose of the study was to determine the extent to which various categories of play were evident in a learning centers period in a first grade classroom. In order to determine this, the behaviours which were recorded on the time sampling sheets were classified according to task.

Table 1 presents these data rank ordered according to the total number of half-minute segments of observation which contained the behaviour.

Table 1
Number of Intervals per Behaviour Category

Category	Number of Intervals
Reading/writing/math	230
Purposeful Movement	127
Art	120
Social Interaction	104
Manipulation	98
Games with Rules	56
Watching	30
Problem-solving	14
Pretend	13
Domestic Activity	5
Cruising	2
Standing Around	1

In order to classify the activities, the observer attempted to describe the essence of the activity in each half-minute segment. Although there were occasions where two activities occurred simultaneously, those instances were

few. In those cases a judgment of the relative importance of each activity was made and a category was chosen on the basis of that judgment.

The categories that the children engaged in were rank ordered as to the amount of time the children spent in each one. The top five were: 3R's (genuine attempts at reading, writing, or arithmetic); purposeful movement (movement directly toward an object or a person); art (free expression in creative activities such as drawing, painting, cutting, etc.); social interaction (verbal or physical with child or adult); manipulation (mastering or refining a manual skill - sewing, threading, plasticine, or water, etc.). There were approximately twice as many genuine attempts at reading, writing, and arithmetic as there were attempts at purposeful movement, art, social interaction and manipulation.

The purposeful movement category of activity included making a choice of movement to pick a library book, to to the word chart, find the stapler, approach a teacher or another child to listen to their story. It appeared in the observations that the children were very directed and there was very little aimless wandering in the classroom. One of the children commented in the interview that he liked learning centers because of the exercise.

The art work included cutting, drawing, plasticine modelling, mobiles, posters, illustrations for their stories and reports, clown faces and pirate costumes. The materials were available for the children to use and they developed their own ideas. The children commented that one of the fun

things about learning centers was being able to make things.

Manipulation or practise skills tended to be in the plasticine, water, cutting activity where the purpose required the intermediate step of molding the plasticine, cutting paper, or pouring water before the project was focused. In the water center, pouring developed a problem; in the cutting, the shapes were developed for a mask or a mobile; and in plasticine, the clay was molded and softened for building later.

The most infrequent activities were connected with co-operative symbolic play and games with rules. Games with rules, watching, problem-solving and pretend combined were about fourteen percent of the observed recorded time.

In order to convert the classified activities into play categories, the observation sheets were further analyzed. Using the four levels of play defined by Smilansky (1968) the behaviour categories were grouped into levels of play. The four levels included:

1. Functional play which included sensorimotor, repetitive muscle movements with or without objects. Rubin (1982) described this as a low level of play.
2. Constructive play where children represent an object by translating it from the concrete world to some other material form. Rubin (1982) suggested this category as the most frequently observed form of play in preschools.
3. Dramatic or symbolic play where an object or the self represents something or someone other than what or who they are.
4. Games with rules which involved play requiring the acceptance of designated rules and an adjustment to these rules (Saracho, 1984).

The related behaviour classifications which corresponded to the play levels included manipulation as functional play; art as constructive play; pretend as symbolic play; and games with rules. Table 2 presents the data rank ordered according to the total number of half-minute intervals in each level of play.

Table 2.
Number of Intervals per Level of Play

Play Levels	Number of Intervals
Functional	98
Constructive	120
Symbolic	13
Games with Rules	56

Approximately 36% of the half-minute segments were considered to be play behaviours. Of the 800 segments, approximately 12.5% were considered to be functional play, that is, play which involved repetitive or practice skills such as rolling or moulding plasticine, cutting string, wool or paper or pouring water. Constructive play behaviours accounted for 15% of the play. These behaviours included finished products such as illustrations for stories or reports, clown faces and pirate costumes. Only 7% of the segments were classified as games with rules. These included teacher-made or commercial games related to the curriculum. The least frequently observed category was pretend or symbolic play which accounted for only 1.6% of the segments. These included segments where the children made something such as a baby

from plasticine or an airplane, for example, and then used the object in a different, involving way. The differences in levels of play and particularly the substantially lower incidences of symbolic play might be due, in part, to the nature of the materials and activities provided to the children. As well, the levels of play expected by the teacher in designing the learning centers activities might also have influenced the levels of play. The limitations of space and equipment were also factors which might account for the differences.

Table 3
Intervals in Non-play Categories

Category	Number of Intervals
Reading/writing/math	230
Purposeful Movement	127
Social Interaction	104
Watching	30
Problem-solving	14
Domestic Activity	5
Cruising	2
Standing Around	1

A large proportion of the activities were considered to be non-play behaviours. Table 3 presents the total number of observation segments which were considered to be non-play. These accounted for approximately 65% of the recorded segments. The most frequently observed non-play activity was reading/writing/math which included all genuine attempts to read, write, and compute. Even though these were considered non-play

behaviours, it is important to note that the children's attitude toward these activities was playful. That is, their approach to these activities included the sense that they could choose; the activities were self-generated and pleasurable. In a sense a proportion of these non-play activities contained elements of play.

Social Group Formations

The second purpose of the study was to determine whether specific categories of play promoted various social groupings and levels of interaction. These data are presented in Table 4.

Table 4
Social Interactions in Various Play Categories

Play Category	Solitary	Social Group Parallel	Social
Functional	27	41	30
Constructive	31	42	47
Pretend	0	4	10
Games with Rules	0	0	56

In order to address this second purpose, Parten's three categories of social interaction in play (Parten, 1932) were used to determine the level of participation in each play category. The categories included: solitary where the child played alone; parallel where the child was beside someone but worked alone; and social where the child was with a partner or group and there was some interaction.

Parten's assumptions were that interaction with others formed part of the growth process of young children and that higher levels of interaction would promote more sophisticated or complex play. The data from this study seem to support her assumption. Social interaction does appear to be related to the level of play. The symbolic and games with rules categories contained very few instances of solitary or parallel interactions.

Roper and Hinde (1978) caution, however, that the relationship between interaction and level of play may not be that simple. Solitary play may not indicate a lack of social ability but may be indicative of a child's level of concentration. Solitary play may also result from the child's need to interact with the materials being used. In this sense the interactive process is extended to the materials as well as other people.

Social Interaction

There were many social interactions among the children and with adults. Some of these were about the activities in which they were involved and some were comments or questions that did not form into conversation. Throughout the center time a great deal of conversation was recorded. Approximately half the time was involved in conversation. There was at least one remark per minute. The subjects addressed three times as many remarks to children as to the teacher.

Social interaction was an area the teacher defined as part of their whole language program. She encouraged children to talk to each other and approach her as part of their learning to discuss ideas and formulate new

ideas that made sense to the children. Her method of teaching during the learning centers was to circulate among the children and to talk to them and ask questions that would involve them more in what they were doing. Of the 800 half-minute segments approximately 50% involved no talk; 37.5% involved child to child talk; and only 12.5% involved child/adult talk.

Approximately one-third of the children's talk was talk that didn't require a response, such as: "*I won. I'm finished.*", or talk directed to self. The other two-thirds were comments or discussions about what they were doing, for example; "*What are you doing?*" "*You have to finish what you start.*" "*Not if I can't find anything.*" "*Can I do it with you?*" "*It doesn't matter you can do what you want.*" Some conversations were about other aspects of their lives such as, "*Have you been to Jule's house? Aren't those neat model airplanes?*" "*The first time I went he didn't have them. That was a year ago.*" "*1985.*" "*That was the first time.*"

About six percent of the child talk was an approach to the teacher such as, "*Look at what I've been doing.*" "*I can't find it*" "*Can I read my story to you?*", etc. Teacher talk was twelve percent of the total talk and in that there was almost five times as much talking involving children in their activity as remarks or directions. Ten of the incidences of teacher talk were episodes with a group of children or a child that was involved in problem-solving or giving feedback on a project. For example, at the waterplay the teacher kept encouraging the children to express what they were doing - "*Sounds like you have made a discovery.*" "*Show me.*" "*What is*

happening?" "One fell in." "What happened when the boat sank?" After the children had the encouragement of one episode they were willing to try another *experiment* on their own.

In interactions there was approximately twice as much non-talk in the 3R's as talk. Manipulative activities involved more talk than non-talk whereas in art the interactions were almost equal. Do activities determine social groupings or social interaction? The social groupings were almost equal in the way the children grouped themselves. The 3R activities included slightly more solitary groupings whereas the manipulative activities had slightly more social groupings. In interactions there was four times as much non-talk in the 3R's as child/child talk. Manipulative activities involved three times more talk than non-talk whereas in art the interactions were almost equal.

Perceptions of the Program

Children's Interviews

The third purpose in conducting the study was to determine whether the teacher's and the children's perceptions of the program were similar. The children were interviewed about that they thought of learning centers, what they did in learning centers, and if they would like more learning center time. All of the children said that learning center time was fun. One child's comment was that it was different than working because "It's funner." Another child explained the difference in saying, "It is more fun than working. I do a lot of worrying that I am going to get something wrong. In learning centers you can do what you like. In learning center we get to

write stories." Another child liked the idea that he didn't have to write, "It's more fun than working. In working we do writing. At learning centers we can do clown faces. I made a clown face called push me/pull me. It was fun." Another child said that it was different from work, "We don't usually get to make stuff like this. In learning centers we do." It was more fun to another child because "It's not like when we write - we spend a lot of time writing - we get to make stuff in learning centers." One child felt he learned a lot. "You learn a lot of things. How to build things and read in books and how to do it from a book."

The children also liked the variety of materials and projects that were available to them. "It's fun. We can make things and do whatever is in the center. We can read, listen to tapes, play with plasticine, make clowns, and then there are three hoops at the back where we can make a three ring circus." Another child said, "We have time to make things that are interesting." Other children listed things they liked to do, such as: "You can play with playdough, water, or you play games." "Learning centers are fun because we can make stuff, and make clown and pirate faces and listen to tapes and read."

All of the children thought they would like more learning center time. They felt they were learning and that it was fun. One child on his way out of the classroom stopped and asked the teacher if there would be learning centers in the afternoon. And another child who had finished his plasticine model town didn't want to destroy it when the bell went for lunch. The

teacher suggested he keep it in his desk and show everyone after lunch. He suggested he would write a little story to go with it in his lunch hour. The enthusiasm and interest was certainly generated by this informal approach to learning and seemed to spark their interest and exploration in language, reading and writing which was the focus of the period for the teacher.

Teacher Interview

The teacher was interviewed to find out why and how she had decided to have learning centers in her grade one classroom. The following summarizes the results of that interview. The decision to use learning centers was part of the teacher's philosophy developed through working in other situations and classrooms. In a lower socio-economic school district the discrepancy between kindergarten and grade one was obvious because of the lack of direct experience the children had with ideas and concepts presented in the school material. She felt they were not ready for skills required in story writing or reading and felt the children needed a hands-on experience to build up the children's background. *"I started working with two other teachers who shared the same philosophy. We thought it was important for the kids to have experiences. There seemed to be a big jump from ECS to grade one. There needed to be an in-between. It is good to work with other teachers at the start. Besides sharing the work of making the materials, we gave each other feedback on how activities worked, what worked with some children, and shared the students' reactions. We shouldered the workload and the responsibility."* She continued to use learning centers because she enjoyed this method of teaching and the children enjoyed learning in this way. The development of learning centers evolved through a gradual process and

required informing the parents of the children's involvement in the program.

"I started with a letter outlining what I planned to do in the classroom and each newsletter I included an article on this approach. I explained that learning was developed through themes rather than through skills. I use themes because children respond and skills, such as phonics, are part of the program. The children get wrapped up in themes and think it is exciting and what they learn has meaning to them." The teacher also became involved with the process and had found as she became familiar with it that she wanted it to be more and more a part of her teaching. She felt her experience had given her confidence and the ability to defend her position about this way of teaching. Her participation in a graduate studies program in education had also given her much of the theoretical background for her actions in the classroom.

In order to start with learning centers the teacher structured the whole class and everyone worked together on one center. This way of developing the concept of the learning centers allowed the teacher and the children to move into the learning with direction and purpose, and yet use the informal and play approach to learning successfully. An example she gave was of starting the reading center with library books. *"I introduced the reading center by dividing the class into two groups. They read to each other and discussed the books as I went around and interacted with them. I would stop the whole class and comment on what I saw happening. If there were two children taking turns reading each page, or if they had chosen parts to read from the story, I would comment so that other children would feel free to*

experiment with different approaches or try something new." After the class had tried four different areas they were then divided into four groups and each group worked at a different learning center. At this point a grade six student was in each of the centers to answer questions, encourage and suggest ideas and to keep the noise level reasonable. This process took until Christmas depending on the group, and then the children were on their own. The beginning structure permitted the children to discover the concept of freedom at the end of the teaching process.

The process of allowing more freedom in the structure was addressed by the teacher. She felt that her plan was to build a section of the classroom that would encourage more active participation in dramatic and co-operative play. She felt that the process for her was one of feeling confident that she and the children were ready. Plans for a dress-up corner with circus costumes to coincide with a circus theme was next in her curriculum plans. The centers were changed every five days to give a variety and yet allow each child to have a turn at the center activity.

The teacher felt that play was an important form of learning in which children are engaged much of the time when they are either alone, or with other children and with adults. She felt that this element of the child's make-up was too important to disregard. *"I encourage them to play and I teach them to explore, discuss, be with others, try different ways, and to comment on how they feel, and share. Play is good and it is useful in my classroom because I use it to move to their level, understanding and interest."*

Participation was definitely an important part of the program where children discover things for themselves in their own way.

Participation in this program also included language and social interaction in the classroom. The teacher thought that, "*Language is not merely an expression of thought but it is used to reflect upon thought processes.*" This theme is central to the whole language approach used in her classroom. Language was frequently initiated by the child, who tries to make sense of a situation by talking about it. As a teacher she felt that risk-taking was an important element of her teaching and that she would encourage the use of language as a way of finding out.

In summary, the picture that emerged in this classroom was one of interest and enthusiasm from the students and the teacher and parents about this informal teaching direction. The teacher seemed satisfied that the children were on task and interested in the language arts topic, the children were able to explore and play with ideas and materials and have freedom of movement while they learned. The learning centers provided a variety of learning materials and activities that seemed to draw the attention of the students. The social interaction between students was open and extended with opportunities for solitary times if needed or preferred by the children. The social grouping of the class had a variety that allowed for different ways of being together. The play level did not depend on social groups, but it did remain at a less co-operative, less dramatic level of play than was needed to support more pretend and problem-solving activity. The teacher was

- providing an atmosphere that fostered interaction, opportunity for choice, and equal opportunity for both boys and girls.

Chapter 5

Summary, Significance, Implications and Recommendations

Summary

The purpose of this study was to determine the extent to which play was evident in a learning centers period in a first grade classroom and the extent to which various levels of play promoted social groupings and interactions. As well, the study attempted to describe the perceptions of the teacher and the students about their learning centers program.

Data were collected through observations of selected children in order to describe their behaviour, levels of play and interaction. The target child approach developed by Sylva et al. (1980) was the method of observation used in the study.

Analysis of the data indicated that approximately 35% of the observed behaviours were categorized as play. When the data were analyzed in terms of levels of play, the results indicated that there was substantially more functional and constructive play than either symbolic or games-with-rules play. These results support those obtained by other researchers who suggest that functional and constructive play tend to be used more by children in educational settings (Rubin, 1978; Roper & Hinde, 1978).

The differences in levels of play and particularly the substantially lower incidences of symbolic play might be due, in part, to the nature of the

materials and activities provided to the children. As well, the levels of play expected by the teacher in designing the learning centers activities also influenced the levels of play. The limitations of space and equipment were also factors which might account for the differences.

In terms of social groupings for play, there was approximately an equal number of segments of solitary and social groupings. The high number of solitary segments might be the result of the social maturity children at this level had to play alone, as Rubin (1980) has suggested, and not a measure of social immaturity. The important distinction is the children's play or non-play behaviours and not the social grouping (Roper & Hinde, 1978).

Interactions were encouraged by the teacher and the proportion of talk to non-talk was very high. Concentrated attention to the materials was also noticeable. The children were frequently on task. There was little standing around or gazing.

A large proportion of the observations were categorized as non-play. Approximately 35% of these were genuine attempts at reading, writing or computation. This was due, in part, to the fact that the learning centers period was included as part of the Language Arts program. It is important to note, however, that the attitude of the children to many of these non-play activities was playful. This seemed to be because some of the characteristics of play were evident in these more structured activities. There were elements such as choice, minimal adult instruction or intervention, intrinsic motivation.

and no adult standard of performance. This suggested that aspects of play were included in these activities.

This attitude toward play was also evident in the routine and structure of the classroom. The choices of movement, action, and interaction made the materials fun for the children. The teacher's thematic program, integrated learning, and activity-based experiences used the expression of child's play to an advantage. Behind the play was the teacher's chosen purpose, which allowed the children to choose within a framework designed by the teacher. Within the framework they were able to initiate and complete their chosen activity. Play seemed to evolve from a sense of having time to explore, not having to have it right, and having a choice. The children commented that this was different from working. The teacher expressed it as making wise choices. She did not refer to the activities as work and there were no worksheets.

The children completed the activities and projects they initiated and developed within the period. Their interest and concentration was sustained, there was very little aimless activity. The teacher said that the period was long enough so that the children could go deeply into their activity. The period of time was purposefully set aside to be involving and not just an activity to be done once an assignment was finished.

The interactions of the students allowed conversation with other children and adults and so the room seemed filled with talk but it was not

noisy. The children made decisions together about what they would choose to do, and how they would set-up the game or activity. Having a partner or being in a small group and having to make decisions seemed to demand this verbalization. The teacher did very little directive teaching. Mostly she gave suggestions and feedback about activities in which the children were involved. She approached them and became involved in what they were doing, or there was a freedom for the children to come to her and ask for help or show her what they were doing.

The gradual process of working the program to a place of freedom of choice within the structure of the period shows one way to change a teacher-directed, subject-bound classroom. The teacher's attempt to bridge integrated experiences in a subject-bound curriculum is evidence that the articulation of Early Childhood Services and grade one programs is possible. This endeavour stemmed from a perceived need of children to have experiences, to enjoy the activities, and to take into account the importance of play in the process of learning.

Significance and Implications

The teacher felt that her role in facilitating and encouraging play was very important. The materials she chose to use and the activities she provided for the children influenced the levels of play observed in this classroom. Therefore, descriptions of what materials and activities promote various levels of play may be valuable to other teachers in promoting learning through play. The observed effect of general attitude and climate promoted in the classroom is also an important consideration. This study

described one teacher's attempt to encourage play through the climate she established in her classroom. Part of that climate gave the children a sense of ownership of their learning process through play and the opportunity for active exploration and interaction with adults, other children and the materials. Promoting teacher understanding of an awareness of how play serves an important function in the cognitive, social, emotional and physical development of children may lead to more use of play in the upper early childhood levels of our educational system.

This study described, in part, one teacher's attempt to implement elements of play in her classroom. Part of this development included an awareness of the importance of play to child development. The development of this awareness in others might promote the use of more child-centered, child-initiated approaches to learning. The results of this study also showed that any type of behaviour might contain playful elements depending on the intrinsic intention of the participants. When interviewed, the children agreed that they had fun during learning centers period.

The trend in Alberta education is toward the articulation of Early Childhood Education and the primary grades. The informal learning approach that fosters play has been emphasized in kindergarten programming for ten years in Alberta and it is hoped that this flexible methodology will be brought into the more formal structure of the primary grades.

Observing and interpreting student's play behaviour in a grade one

classroom may be beneficial to educators in the process of mandating the articulation of ECS and grade one curriculum. Educators can use the insights gained in one classroom as a guide in their own teaching. Each incident of teaching and learning observed and analysed may add to a storehouse of information that makes the process of articulation valid.

The study also described the philosophy of a first grade teacher and a method of informal learning which she used in her classroom and for which she had articulated a theoretical framework. The provincial program development division of Alberta Education has suggested a policy that expects to articulate the development, implementation and evaluation of Early Childhood Services and primary education to ensure continuity in children's learning experiences. Educators will want to be aware of the implications of more informal approaches to teaching and learning. This study demonstrated that children make choices in a learning centers period toward academic materials and projects; that they concentrate on their chosen project alone, with a partner, or with a group of children; that they have an opportunity to use language in their social interactions to communicate with others and make decisions. The children commented that learning centers period was different from work because they got to do what they wanted to; they were able to move around; and they were able to make things. The teacher used play to encourage the children to enjoy their learning, and to encourage interactions as part of her whole language program. This study showed that play has an important place in this classroom's curriculum. Teacher training programs might be modified to incorporate strategies and methodologies that

include the significance of play in the classroom.

Recommendations

From the description of learning centers period in this classroom the following additional areas may warrant further exploration:

1. A description of the whole day in a grade one classroom might be undertaken to see if there is a carry-over from the informality of the learning centers into other areas of the curriculum. What are the students' and teachers' perceptions about which portion of the day is play?
2. Other teachers with learning centers in their classroom might be observed to find out alternate approaches to incorporating informal teaching strategies and the use of play in the curriculum.
3. A class might be studied throughout the process of setting-up learning centers in their classroom and play as part of the curriculum. How does the teacher manage the process? How do the children manage the time? How are the parents involved?
4. Teachers might be interviewed before they begin the process of articulation, to investigate the development of the process and the impact it has on their philosophy of teaching and learning.
5. Observations of fewer children for longer periods of time might allow exploration of the play experience to greater depth.

Theories on play have had an important effect on educators throughout the centuries. The current interest in finding a theoretical framework that supports the interest and learning of children evolves from a concept of more unstructured, activity-based and integrated experiences. Much of the literature supports play as part of the cycle of child development and learning. Play has a place in education and is a valuable way to engage students in learning.

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