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A Study of the Academic Productiveness of a Daily Thirty-Minute Choice Period for Six Kindergarten Children

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Abstract

The purpose of this study was to determine whether kindergartners were benefiting academically from their daily thirty-minute choice time. Observations, interviews, and documents review provided empirical evidence that these choice periods were, indeed, academically beneficial for students provided the activities were developmentally appropriate and perceived by the child as fun. In these cases, academic skills were practiced and honed, and cognitive growth demonstrably occurred. However, if the element of choice was missing, choice time became just another task assigned by the teacher.

Introduction

Play is vitally important to children, not just to their social and emotional development, but to their academic achievement as well. . . . Play is how children interpret what they learn. (Cohen, 2002)

As a third-year kindergarten teacher in my sixth year in the teaching profession, I have heard arguments concerning both sides of the free play issue. Some of my colleagues have expressed opposition to a thirty-minute choice period in which time kindergartners choose from a variety of activities such as housekeeping, blocks, puzzles, games, writing, and playdough. They consider the time better spent in more structured learning center activities in which a specific academic product or outcome is expected. I have heard other colleagues insist that this type of choice period is developmentally appropriate and important to the acquisition of social skills. I believe that allowing children to choose what to do and who to do it with is vital to their growth as social beings and to their development of initiative, educational motivation, and personal ownership over their learning. However, my colleagues' opposition made me wonder how academically productive a choice period of free play actually is. The purpose of this study was to determine whether my kindergartners were benefiting academically from their daily thirty-minute choice time. My research question: How academically productive is a thirty-minute choice period for six kindergarten children in my classroom?

Background

I teach two full-day kindergarten classes enrolling a total of 46 children. One class meets on Mondays, Thursdays, and alternating Wednesdays. The other class meets on Tuesdays, Fridays, and alternating Wednesdays. I have six Russian-speaking children and one Spanish-speaking child in our school's ELL program. Eight of my students receive Title I help, and seven are in the special education program. Our school is located in a rural area, and my students come from a variety of socio-economic situations.

Since the beginning of the year, I have included a thirty-minute choice period in our daily schedule. During this time, the children are encouraged to choose any activities they like. There are restrictions about who plays in the housekeeping area, as it is small. (The person designated as the door-holder for the day may choose two others to play with him/her in that area.) Since we have only one computer available to the children, the special helper for the day is given the first option to play educational games on it. The only other restrictions are naturally occurring, such as how far the available playdough will stretch or the number of players for which a game is designed.

The different activities available are as follows: computer, writing center (including paper, pencils, markers, crayons, whiteboards, and chalkboards), math manipulatives (including linker cubes, counting bears, beads, and pattern blocks), board games, card games, puzzles, playdough, blocks, barns and animals, dollhouse, a variety of folder games (including rhyming, matching, counting, opposites, and phonics), and a housekeeping area (including play food, dishes, dress-up clothes, puppets, stuffed animals, and a calculator). The housekeeping area is enclosed by a puppet stage with a curtain often used as the window of a restaurant or store where other children can order things. There are also small clipboards and writing utensils for "taking orders." At the beginning of my research project, I added a mailbox to the writing center along with stamp-like stickers, old address labels, and envelopes. (See Appendix A.)

Methodology

Participants

The primary subjects for my study were six children, three from each of my kindergarten classes. I selected two students I considered to be performing at a high academic level (given the pseudonyms of Billy and Lucy), two middle range (given the pseudonyms of Hannah and Karen), and two low range students (given the pseudonyms of Trent and Ben). I chose three girls and three boys.

As secondary subjects, I chose two kindergarten teachers, one full-time first-year teacher and one half-time third-year teacher (given the pseudonyms of Miss Green and Mrs. Montrose, respectively). I chose teachers with contrasting views regarding the importance of a free-choice period. Miss Green expressed a preference for a structured learning center time where a specific academic outcome was planned and expected. Mrs. Montrose had choice periods very similar to mine in her classroom. Also as secondary subjects, I observed the remaining students in my two classes as they participated in choice time.

Signed consent forms were obtained for the six focal students as well as Miss Green and Mrs. Montrose. Implied permission forms were sent home with each student in my class to inform their parents of my project.

Data Collection and Analysis

Two of my methods of data collection were observation and interview. I observed and took notes during twelve of the thirty-minute choice periods between the dates of March 17 and April 4, 2003. Eight of these observation periods were video-taped for further analysis. I watched the eight videos of children participating in choice time and took notes on pertinent information found. Photographs were also taken of student artifacts and students participating in different activities. During or after choice time on four occasions, I conducted interviews with each of the six focal students. A third method which offered triangulation of data was review of documents, such as the letters students addressed to me in our class mailbox.

After sorting and organizing data gleaned from these documents, I looked for patterns and evidence which supported or refuted the academic productivity of choice time. I reviewed the notes I had taken of my observations and interviews of the six focal students. I also considered what I had discovered through interviewing Miss Green and Mrs. Montrose.

Literature Review

I carefully studied existing literature to get an idea of activities which could be considered academically productive. The research and journal articles I found helped me to interpret the data, and I read the opinions of experts regarding what constitutes an academically productive activity and what research has determined about the importance of free-play and choice in a kindergarten classroom.

Ellen Booth Church (1999) contends that "Five- and six-year-olds learn to concentrate by doing things that interest them. . . . Provide extended periods of time for children to do independent activities" (p. 16). She further recommends that teachers "offer a wide variety of activities on different skill levels from which children can choose during independent-activity time" (p. 16). In another article, Church (2000) states that "The trick is to give children choices within the boundaries of what *you* consider to be appropriate and acceptable choices" (p. 28).

Jolivette, Stichter, Sibilsky, Scott and Ridgley found in their 2002 study that, not only is choice vital to developmentally appropriate curricula, but "choice-making has been effective in increasing appropriate social behaviors and increasing appropriate academic behaviors" (p. 397). Researchers in another study (Kostelnik, Black & Taylor, 1998) stated the importance of students participating in decision-making and taking responsibility for their own learning (p. 207). Therefore, when a student is allowed to choose what he or she would like to do from an appropriate array of activities, the very act of choosing adds to the possible academic productivity of the activity.

According to Plevyak and Morris (2002), "children at kindergarten age do not learn in the same manner as other school-age children" (p.26). These authors recommend a play-based kindergarten as best practice for young children. Lawrence Cohen (2002) describes play as a way for children to integrate what they learn. Other experts contend that play aids symbolic thinking (Leong & Bodrova, 2002), promotes literacy (Nel, 2000; Pickett, 1998), and develops problem-solving skills (Seefeldt, 2002). A study by Korat, Bahar, and Snapir (2003) validated Vygotsky's idea that higher mental functions are tapped when children dialogue with peers and caregivers (p. 386). Sociodramatic play, they note, includes such dialogue. Also, regarding literacy development in kindergarten children, Nielsen and Monson (1996) state "researchers have found that both writing and play have a dominant role in literacy development" (p. 261). My review of the literature led me to suspect that, to be academically productive, an activity can involve

dramatic play, playing with manipulatives, playing games, or make-believe play and should be perceived as play by the child.

Data Presentation and Analysis

From this research, I hypothesized that the thirty-minute choice time currently occurring in my classroom would be academically productive if the children participated (a condition for anything to be productive), if they perceived what they were doing as play, and if they had some choice in their activities. Since choice had always been a part of the thirty-minute choice period, I began to look at the data for evidence of participation and student perception.

As shown in the Table 1, when asked why they chose a particular activity, ninety per cent of the time the focal children stated that they liked it or it was fun. Much less frequently, the children reported that they enjoyed winning or had never had a turn doing the activity before. The question was asked twenty-one times of the six focal students.

Table 1. Self-reported reasons why focal students chose a given activity

<i>Answers</i>	<i>Percentage of time answers were given</i>
I like it / It was fun	90%
I could win (be successful)	5%
I had never had a turn before	5%

When asked if most of the children were actively engaged in an activity during an entire thirty-minute choice time they had observed, Miss Green and Mrs. Montrose indicated that they had been, with one exception. Mrs. Montrose noticed a student standing beside the computer which another student was using and assumed the student was waiting for a turn. Since a particular child is given the first option to use the computer each day, the other child was probably not waiting but watching the computer game. Frankly, I was surprised that Miss Green did not mention any children being off-task. She had always been openly opposed to the type of choice time I had in my classroom, believing it to be too loosely structured.

A review of the eight video-taped choice sessions showed most children actively engaged, although there were some times a few (two to three) seemed to be watching and deciding which activity to join. Also apparent on the video-tapes were a small percentage of children going from activity to activity without investing in anyone thing for very long.

Table 2 below indicates the percentage of times each activity was chosen by the focal students out of 52 choices they made. Table 3 indicates what percentage each activity was chosen by the focal students as a child's favorite out of 23 answers given. The data in these tables was taken from the video-tapes as well as my notes from observations and pertains to the six focal children.

Table 2. Activities chosen out of 52 choices made by focal students in 12 observed sessions

<i>Activities Chosen</i>	<i>Percentage of Time Activity Was Chosen</i>
Writing center	23%
Games	21%
Playdough	19%
Housekeeping	12%
Blocks	10%
Folder games	8%
Math manipulatives	4%
Other toys (e.g., doll house, barn)	4%

Table 3. Activities Chosen as Favorites by Focal Students Out of 23 Choices in 12 Sessions

<i>Activities Chosen as Favorites</i>	<i>Percentage of Time Activities Chosen as Favorites</i>
Writing center	43%
Playdough	21%
Blocks	13%
Games	9%
Folder games	4%
Housekeeping	4%

Findings and Discussion

The data gathered through observation, interview, and documents review support the following findings related to the question *How academically productive is a thirty minute choice period for six kindergarten children?*

- (1) During thirty-minute choice periods, six kindergarten students used academic skills such as collaborating, communicating, writing, reading, and problem-solving, making choice time academically productive.
- (2) During thirty-minute choice periods, six kindergarten students were actively engaged in appropriate activities which they considered fun, thereby increasing educational productivity.

Miss Green reported observing the following skills being used during choice time. Even though her attitude toward choice time in my classroom was not positive, her list of observed skills was as long as that of Mrs. Montrose, a teacher who favored loosely

structured choice time. I had not expected this.

Miss Green reported observing the following skills:

- (1) Strengthening fine motor skills and using creativity with 3-D shapes
- (2) Planning and solving problems
- (3) Designing and building
- (4) Applying writing skills to real life
- (5) Seeking out assistance to spell words

Mrs. Montrose observed the following skills being used:

- (1) Communicating
- (2) Sharing
- (3) Spelling and sounding out words
- (4) Reading
- (5) Matching

During my four observations followed by interviews, Billy played Boggle, Jr. with several different peers. In this game, there were several word cards, each with a different four letter word written on it. There were six to eight plastic cubes, about the size of large dice, with a letter on each side. The object of the game was to find the letters to spell the word before the timer went off. One day, I sat down at the table where Billy and a friend were working. Billy put a new word card down (*boat*) and turned the timer on. He and his friend began turning over the dice excitedly. "Can you find the *B*?" Billy asked.

"No. Wait, here it is!" replied the friend.

This continued until they completed the word. All four hands shot into the air in victory. The timer hadn't gone off. During my observations, I saw several children play this game and, in every case, they worked as a team, rather than competing.

I also observed Billy playing folder games (games targeting certain academic skills), math manipulatives, "Don't Spill the Beans" (a balancing game), "Old Maid," and playdough. He told me that his favorite activities at choice time included books and folder games. When asked what his favorite choice time activities were, Billy said, "I like books and folder games." Billy performs at a very high academic level.

Lucy, another high student, spent a lot of time playing games (especially the card games "Old Maid" and "Go Fish"), working at the writing center, and using playdough. When asked what her favorite activities were she said, "Sometimes blocks, sometimes playdough, sometimes writing, sometimes cards." One particular day, I noticed lots of giggling coming from a table and looked over to see Lucy playing "Old Maid" with her mom, who had come to help in the classroom. Later she reported to me, "I like playing cards with my mom 'cause you get to win, and I won!"

Hannah, a mid-level academic performer, chose the writing center, housekeeping and playdough. She consistently chose the writing center as her favorite activity. "I get to draw stuff to give to my family," and "I wrote Rex (a peer in the class) a card" were two

comments she made. One day Hannah and two peers were playing store in the housekeeping area. "Can we use the tape?" she asked me.

"Sure," I replied.

She got the big tape dispenser from my desk and took it to the housekeeping area where her friends were busy writing with markers on several pieces of paper. Soon there were several signs taped to the window of their restaurant. "Will you read your signs to me?" I asked Hannah.

Pointing to each in turn, Hannah read, "No Boys Allowed," "Store Closed," "Girls Can Come Near," and "Store Open." Hannah had begun the year receiving Title 1 help but was exited just a few months later due to her quick progress as a reader and writer.

Karen, another mid-level academic performer, chose housekeeping, writing center, games, math manipulatives, and folder games. One day, she and a peer were lining up colored counting bears together. There were two red, one blue, four green, four yellow, four red, and five blue. The boy working with Karen observed aloud, "Now I know that $2+1+4+4+4+5=20$!" This related directly to a recent math lesson during which we learned to decompose numbers. Karen indicated that her favorite things to do at choice time were computer and writing center.

Trent, a low academic performer, chose the writing center, playing restaurant in housekeeping, folder games, and Mr. Potato Head. The writing center and "playing" were his favorite things about choice time, he said. He told me that he liked the writing center because "I wrote some notes and letters because I wanted to write some mail for people." That day he had spent a lot of time sitting at the writing center table, surrounded by markers, stickers, stencils, stamps, paper, and envelopes making pictures and notes for family and friends. He put these in the mailbox to be delivered at the end of the day.

Another academically low student, Ben, chose playdough, writing center, and blocks and expressed his favorite part of choice time as-being "fun toys like playdough" and "getting to play." During one session of working with playdough, Ben showed me a biscuit he had made. He had cut out the letter *B* and placed it on top. "B is for biscuit," he said to me.

I observed children collaborating and problem-solving in the writing center. They asked peers how to spell their names and looked at environmental print for spelling. The mailbox at the writing center was a big success. Several of the children, including all but one of the focal children, wrote letters to peers or family members at one time or another. This included writing "to" and "from" on envelopes, and adding names in appropriate places.

As mentioned before, the housekeeping area was often turned into a restaurant with signs taped to the window to convey such information as who could come to the store, whether it was open, or what the menu was for the day. For a few days, the store owners were showing some disturbing prejudice with signs like "No Boys Allowed." I considered the conflict resolved when the sign "Boys and Girls Allowed" appeared. This was evidence of social growth and an increase of tolerance I witnessed during choice time.

I observed children drawing and coloring dollar bills to use in the store, assigning roles in housekeeping ("You be the dad, and I'll be the son"), using the play phone for conversations that sounded like those they might have heard adults make, and writing restaurant orders on clipboards. On one occasion, after bringing me my food order, one child asked me to sign the check. When I

started to sign with my pencil, he produced a pen and asked me to use it instead.

Also noted were a few students roaming around between activities or only staying a short time at an activity. It seemed to me that they did not stay long enough to benefit from or enjoy any activity. One of my students, a boy whose behavior sometimes caused problems, was seen sitting in a corner listlessly tossing stuffed animals into a basket. I wondered if he had trouble making good choices unless the environment were more structured. This is a question I have for future study. What is the optimal balance between choice and structure?

Conclusion

When I began this project, I was fully convinced that kindergarten children need a period of free exploration as well as socialization during their school day. However, I was unsure if such a choice period was academically beneficial. Through my observations, interviews, and documents review, I have empirical evidence that these choice periods were, indeed, academically beneficial for my students. This evidence was so compelling that even my skeptical colleague, Miss Green, reported seeing several academic skills used during choice time. She said, "[Choice time] is a good break because it incorporates play into academics." It was interesting to note, however, that, when interviewed after her observation, she still preferred a more structured choice time with definite academic outcomes and a strictly limited number of participants at each activity. I wondered if this preference was linked to her status as a first-year teacher with a desire to have fairly strict control of her classroom.

I found that, if I included choice, developmentally appropriate activities perceived by the child as fun and having the power to actively engage students, my kindergarten children were happily engaged in academically productive activities. Academic skills were practiced and honed, and cognitive growth demonstrably occurred. If the element of choice was missing, or if I strictly assigned a specific task to each activity, the happy atmosphere of busy exploration changed. Choice time became just another set of jobs assigned by the teacher.

One day I observed Trent, one of the academically low focal students, playing a highly academic folder game which required him to match complicated pictures. He sat hunched over the folder game, lips tight in a determined way, for several minutes until he had found every match. No one had forced him to choose folder games or told him how many to complete in an allotted time. He had not been assigned other peers to work with. He chose to finish a task which obviously stretched his skills, showing motivation, engagement, and ownership in his learning. When asked later that day what his favorite thing about choice time was, Trent said, "You get to have fun!"

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Appendix A Children at choice time

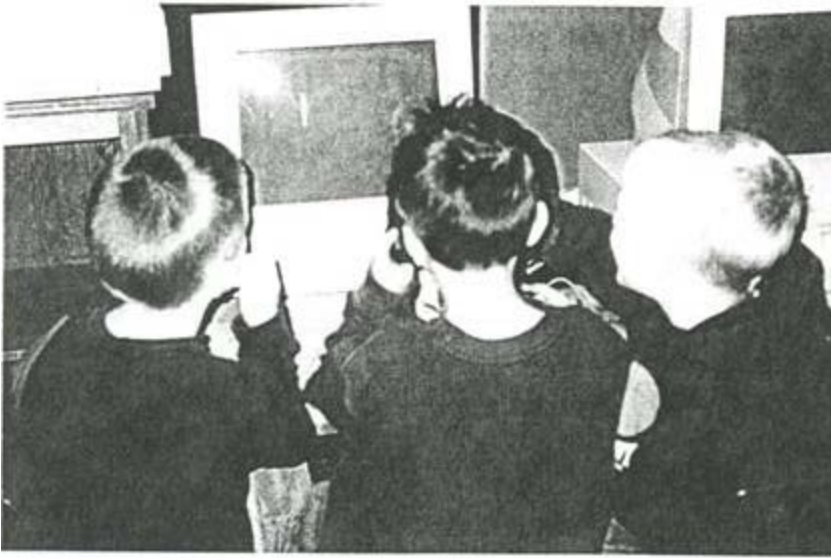


Figure A-1. Playing Jumpstart Kindergarten with friends



Figure A-2. Producing mail at the writing center

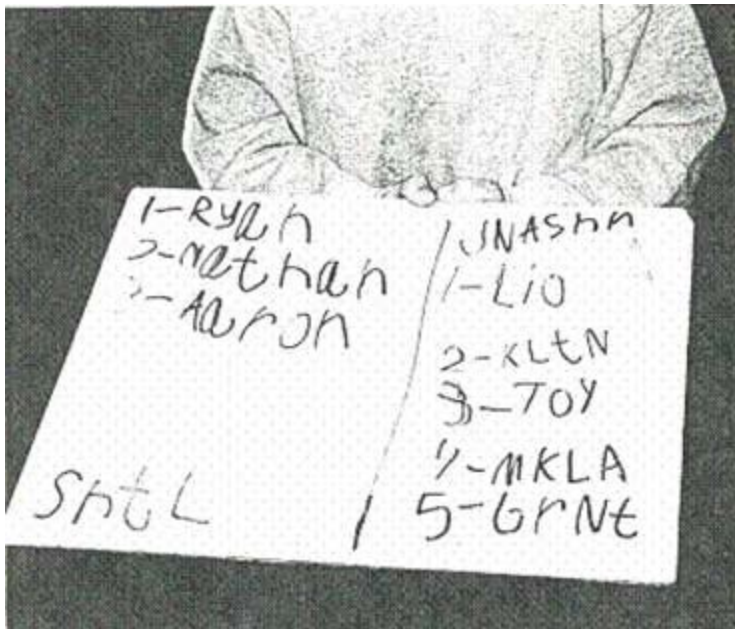


Figure A-3. Using conventional and invented spelling at the writing center

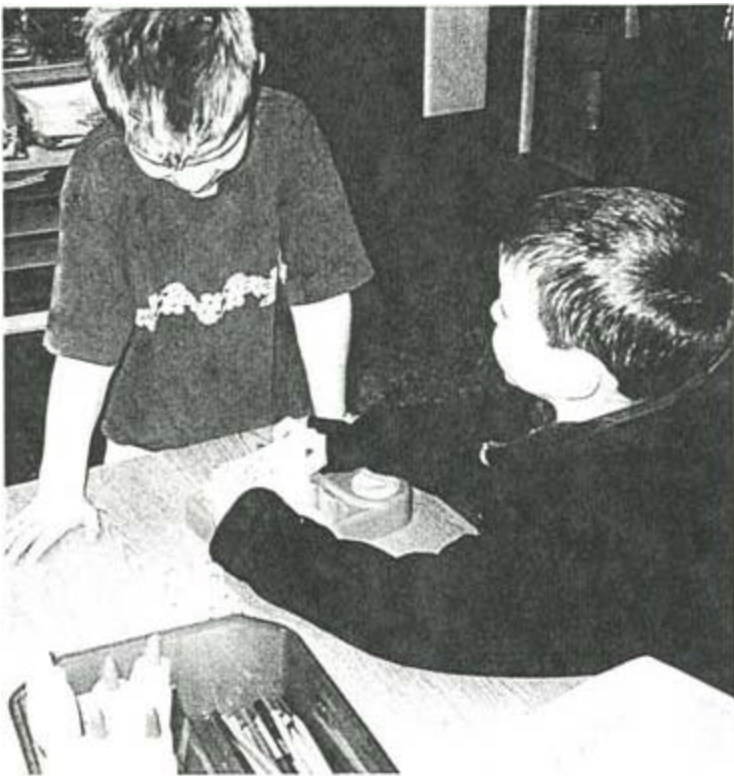


Figure A-4. Children playing "Boggle, Jr." during choice time



Figure A-5. Playing "Old Maid" with friends at choice time

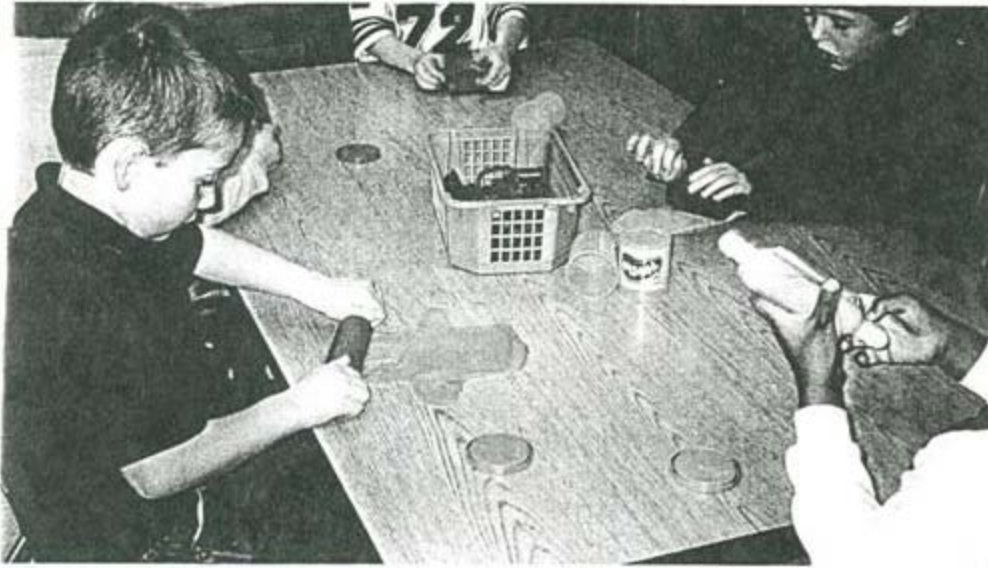


Figure A-6. Children at the playdough table



Figure A-7. Friends playing with the barn

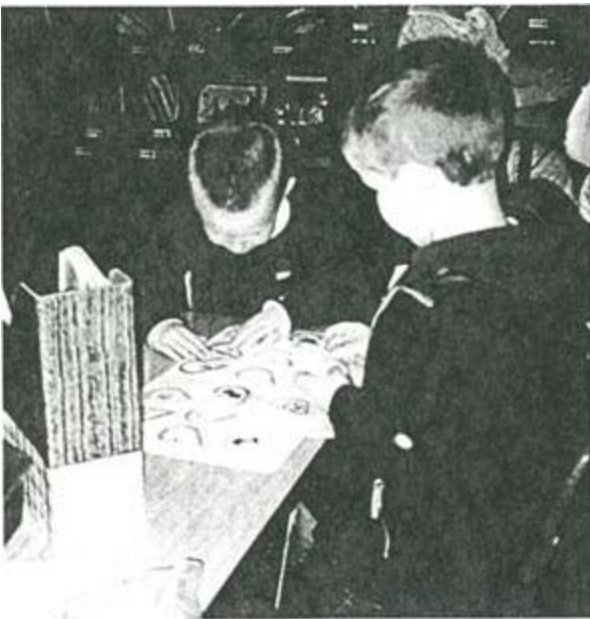


Figure A-8. Playing a folder game to find the opposites



Figure A-9. Children making signs for heir restaurant



Figure A-10. Signing saying "Store Closed"



Figure A-11. Student making money

Appendix B
Consent Form for Focal Students

Sherrie Lyle
8613 NE 138 Ave.
Vancouver, WA 98682
885-5250/891-1101

Dear Parent,

I am a graduate student in Elementary Education at Washington State University as well as teaching kindergarten at Glenwood Heights Primary School. For my Master's thesis, I will be researching how academically productive a thirty minute choice period is for the children in my kindergarten classes. I have worked with my \VSUV chairperson, Dr. Linda Mabry, in designing this research.

To aide me in this research, I am asking you to allow me to interview your child. The interviews will be short, conversational and non-threatening. Interviews may be audio-taped, but tapes will be confidential and erased shortly afterward. Video-tapes and photographs will also be taken but these will be kept confidential and no full-face videos or photos will be published or kept. Your student's name will not be included in any data collection or reports.

Participation is completely voluntary, and you and/or your child are tree to change your mind at any time for any reason. Refusal to participate will also not affect your child in any way.

If you have any questions, please do not hesitate to contact me at the above address or phone numbers. In addition, you may contact Linda Mabry at (360)546-9428 or the WSUV Human Subjects Committee at (360)546-9667 if you have any questions or concerns.

I agree to allow my child to participate in this project. I realize that I am free to withdraw my child from the project at any time.

Signature _____ Date _____

Appendix C
Implied Consent Form

Sherrie Lyle
8613 NE 138 Ave.
Vancouver, WA 98682
885-5250/891-1101

Dear Parent,

I am a graduate student in Elementary Education at Washington State University, Vancouver, as well as teaching kindergarten at Glenwood Heights Primary School. For my Master's thesis, I will be researching how academically productive a thirty-minute choice

time is for my kindergarten classes.

I will be observing the children as they interact during the choice period. I will also be taking photographs and videotapes to record what occurs during those periods. However, these videos and photos will be kept confidential and no full-face videos or photos will be published or kept.

Participation in this study is completely voluntary. If you have any questions, please do not hesitate to contact me at the above address or phone numbers. In addition, you may contact Dr. Linda Mabry at (360)546-9428 or the WSUV Human Subjects Committee at (360)546-9667 if you have any questions or concerns.

Thank you for your help.

Sherrie Lyle

Appendix D Consent Form for Kindergarten Teachers

Sherrie Lyle
8613 NE 138 Ave.
Vancouver, WA 98682
885-5250/891-1101

Dear Colleague,

I am a graduate student in Elementary Education at Washington State University as well as teaching kindergarten at Glenwood Heights Primary School. For my Master's thesis, I will be researching how academically productive a thirty-minute choice period is for the children in my kindergarten classes. I have worked with my WSU chairperson, Dr. Linda Mabry, in designing this research.

To aide me in this research, I am asking you to allow me to interview you after you have observed a thirty-minute choice period in my classroom. The interviews will take from twenty to thirty minutes. Interviews may be audio-taped, but tapes will be confidential and erased shortly afterward. Actual names will not be included in any data collection or reports.

Participation is completely voluntary, and you are tree to change your mind at any time for any reason.

If you have any questions, please do not hesitate to contact me at the above address or phone numbers. In addition, you may contact Dr. Linda Mabry at (360)546-9428 or the WSU Human Subjects Committee at (360)546-9667 if you have any questions or concerns.

I would like to participate in an interview. I realize I am free to withdraw from this project at any time.

Signature _____ Date _____

Appendix E Teacher Interview Protocol

Introduction:

Thank you for being willing to take time to meet with me. Before we start, I want to make sure you know that you are free to answer or not to answer any questions that I ask. You can also end this interview at any time that you wish to stop, but I've planned for this to take from twenty to thirty minutes of your time.

I am interested in how academically productive a thirty-minute choice period is for my kindergarten students. After you have observed them during a choice period I would like your answers to the following questions.

1. Are most of the children actively engaged in an activity during the entire thirty minutes?
2. What skills do the children use as they work in the different centers?
3. Have you observed children working together in a manner that results in one or both of the children sharpening academic skills? Please explain.
4. What would you change about the choice period as you have witnessed it?
5. What was your opinion of choice time before the observation? Has your opinion about choice period changed as a result of your observation or stayed basically the same?
6. Could the time have been better spent in other activities to increase academic skills? What other activities?

Appendix F Student Interview Protocol

1. What did you choose to do at choice time today?
2. Why did you choose that?
3. What is your favorite thing about choice time?
4. Did you do anything new today?

