COMPARISON OF MONETARY CONCEPTS OF KINDERGARTEN CHILDREN AND FIRST GRADE CHILDREN

By

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CHAPTER I

THE PROBLEM AND ITS IMPORTANCE

This study was concerned with the monetary concepts of children enrolled in the first grade of public schools. McCarty (1967) validated a test of four monetary tasks for three- and four-year olds. Dunkin (1972) validated this same test for urban kindergarten age children as did Harper (1972) for rural kindergarten children. Masters (1972) validated the Monetary Concepts Task Test for low income, black children.

Need for the Study

In one way or another, money is associated with every aspect of life. This fact gives impetus to the need for providing opportunity for children to learn and know about money. In many families both parents are earners, and it is important that the children have an awareness of what their parents are doing and why they are away from home. Unlike former generations, children today are exposed early to the idea of spending. Under these conditions, helping children learn the consumer role has become a unique responsibility of modern society in the United States.

Since economic education, like all education is a process of growth through gradual development, it can and should begin at an early age (New England Economics Education Council, 1966). Various research studies indicated that preschool education should form the basis of

economic education (Marshall, 1964; Robison, 1964; and McNeal, 1964).

In curriculum planning for young children, it is important that teachers be cognizant of the capabilities that children possess at each level. This knowledge should be related to the experiences that children have and the experiences they need to have to prepare them for their consumer role.

Strauss (1952) delineated the developmental stages in the meaning of money for children. Since that time, there has slowly developed an interest in researching the concepts needed to provide monetary experiences for young children.

Assumption

Dunkin (1972) found that the majority of the items on the money-sorting task of the Monetary Concepts Task Test were correctly identified by the urban, kindergarten children, suggesting that this section of the test would not provide information for curriculum for kindergarten children. Harper (1972) recommended that Test I--Money-Sorting Task be omitted, and begin testing with Test II--Coin-Identification Task, when testing children over five years of age. The assumption has been made that urban, first grade children could correctly identify the items on the money-sorting task; therefore, the money-sorting task was not given to first grade children in this study. The monetary tasks that were measured are: (1) the ability to identify coins, (2) the ability to identify the value of coins, and (3) the ability to determine equivalent values of coins.

Purpose of the Study

The major purpose of this study was to compare the abilities of kindergarten and first grade children on three tasks of the Monetary Concepts Task Test developed by McCarty (1967). Three subsidiary purposes were also examined: (1) to compare the responses of kindergarten boys and first grade boys to three tasks of the Monetary Concepts Task Test, (2) to compare the responses of kindergarten girls and first grade girls to three tasks of the Monetary Concepts Task Test, and (3) to compare the responses of first grade girls and first grade boys to three tasks of the Monetary Concepts Task Test. The three monetary tasks which were measured in this test were: (1) the ability to identify coins, (2) the ability to identify the value of coins, and (3) the ability to determine equivalent values of coins.

Hypotheses

This study examined the following hypotheses:

(1) There will be no significant differences between kindergarten children and first grade children in their responses to three tasks of the Monetary Concepts Task Test:
   (a) to identify coins by name
   (b) to identify the value of coins
   (c) to determine equivalent values of coins.

(2) There will be no significant differences between first grade boys and kindergarten boys in their responses to three tasks of the Monetary Concepts Task Test:
   (a) To identify coins by name

(b) to identify the value of coins

(c) to determine equivalent values of coins.

(3) There will be no significant differences between kindergarten girls and first grade girls in their responses to three tasks of the Monetary Concepts Task Test:

(a) to identify coins by name

(b) to identify the value of coins

(c) to determine equivalent values of coins.

(4) There will be no significant differences between first grade boys and first grade girls in their responses to three tasks of the Monetary Concepts Task Test:

(a) to identify coins by name

(b) to identify the value of coins

(c) to determine equivalent values of coins.

CHAPTER II

RELATED LITERATURE

The literature reviewed is presented in the following categories: development of a concept, money concepts of preschool age children, money experiences of preschool children, money concepts of school age children, money experiences of school age children, and the need for consumer education for preschool and school age children.

Development of a Concept

The literature revealed much concerning the process by which a child develops a concept. Piaget (1930) has defined definite stages that a child passes through in conceptual development. Various researchers (Curti, 1950; Annett, 1959; and Durkin, 1959) have supported this developmental theory. However, other researchers, such as Wenzel and Flurry (1948), Humphrey (1951), and Wann, Dorn and Liddle (1962) reported that concept development is continuous and is not confined to definite stages. Although researchers differ in the way that they believe conceptual development occurs, there is agreement that there is some orderliness to the development.

Schuessler and Strauss (1950) found that both boys and girls pass through stages of learning and that each stage is based upon knowledge characteristic of previous stages. These findings suggest that a child's responses develop from very simple modes of responses to highly

complex ones. Concreteness characterizes lower levels and abstractness higher levels. Schuessler and Strauss (1951) did further testing to extend their findings and found that significant differences in logical reasoning did exist at different ages.

Money Experiences of Preschool Children

The Gruenbergs (1933) set forth a general principle for the money education of children which suggested allowing young children to assume some responsibility for money use which included allowing them to make their own decisions for the use of part of their own money. Since that time, much controversy has been centered around the giving of an allowance (Hanson, 1933; Gruenberg, 1937; Ojemann, 1933; Gruenberg and Kreche, 1958; Harris and Harris, 1964; Lindberg, 1968, and Changing Times, 1972). The consensus has been reached that even the very young child needs a few pennies of his own to manage. Lindberg (1968) indicated that the child needs guidelines for spending part of his allowance, but if he is to learn to manage it, he must have a reasonable amount to do with as he chooses.

Kathleen Tomjack (1959) introduced a unit to her primary children to help achieve some understanding of money. The unit began with the children learning to recognize each coin and name it correctly. Once the children understood the value of coins, they wanted to use them, and a classroom store was set up. As a result of this unit, she reported that the children developed a sense of trust and responsibility in using money and self-confidence was gained to meet real-life needs involving money.

Robison (1964) tested kindergarten children before and after a ten

week period of planned experiences in consumerism. After the unit, ten children, as compared with four children prior to the unit, were able to identify six types of money. Fifteen of the 25 children showed score increases on money identification tests in addition to the four children who maintained perfect scores.

Money Concepts of Preschool Children

Hurlock (1964) reported that a child may be able to identify different coins but the names of coins are meaningless unless the child has had experiences with money. Because few children have had much opportunity to spend money before starting school, the development of money concepts lags behind that of many other concepts.

Strauss (1952) found that the development of money concepts begins shortly before three. Children between the ages of three and four years, six months can distinguish between coins and non-money objects. Children of three and four may divide coins into separate piles of copper and silver. However, these children could not consistently match pairs of coins. The maximum distinction they can make is between a penny and something else that is not a penny. A coin of greater value is chosen only by chance or by its greater size. The children may understand that a penny is involved in buying but deny the use of other coins in the buying process.

Children between the ages of four years, eight months and five years, eleven months are capable of distinguishing nickels from other coins. A child's preference for a coin is based on rote memory or upon the coin's greater size. It is now understood that money has to do with buying. Any coin will buy anything at this stage of development. Money

buys things, and if money accompanies transactions, then transactions take place (Strauss and Schuessler, 1951).

Robison (1964) tested two groups of 25 five-year-olds on their ability to identify six denominations of money. Four children in each group were able to identify all the money, which included a dollar bill, a check, a quarter, a dime, a nickel, and a penny. In addition, four children in each group identified correctly five out of six items.

McCarty (1967) investigated the preschool child's (1) ability to differentiate coins as money, (2) ability to identify coins by name, and (3) ability to identify the value of coins. Her findings (1967, pp. 28-29) were:

1. Children's ability to identify coins as money increases with age.
2. Children's ability to identify coins by name increases with age, and coins of smaller denomination are correctly identified more frequently than coins of larger denomination.
3. Children's ability to identify the comparative values of coins increases with age.

Grojean (1970) investigated the monetary experiences and consumer practices of young children. She found that all children had some experiences in obtaining money and spending money. Eighty-five percent had had experiences in saving but less than 20 percent had had experience in borrowing money. There were no sex differences in degree of involvement in consumer practices except that more five-year-olds received an allowance than did four-year-olds. Four-year-old children more often exhibited lack of knowledge or the development of erroneous concepts than did five-year-olds.

Money Concepts of School Age Children

Hurlock (1964) reported that the six-year-old can name pennies, nickels, and dimes. The seven-year-old knows what a quarter is and may be able to tell how many pennies are in a quarter. By the time he is eight and one-half years old, he can match equivalent amounts with different coins, even with complex combinations. Variations in children's concept of money stems from differences in learning experiences. The amount of money the child has to spend is not as important as the way he uses it.

Strauss (1952) studied the stages of money development and found that at the age of six the child can match all the United States coins by colors and sizes, and is aware that one must pay for goods. Between six years, three months and seven years, ten months, he becomes aware of the mathematical relationships central to buying and by the end of the period he is quite adept at making change.

Eliot (1932) and Neisser (1960) suggested that a family's emotional climate is instrumental in the development of a child's attitudes toward money. Wohlner (1971) substantiates the theory by indicating that youngsters absorb attitudes of generosity or tightfistedness, of prudence and caution and of lightheartedness from the examples their parents set. The meaning that money has for children begins to take shape long before they actually handle it.

Money Experiences of School Age Children

As children matriculate through the primary and intermediate grades, they learn through example and experience about the money side of life. Researchers down through the years have been concerned with

influences that determine the quality of these learnings.

Hanson (1933) found no relationship between children having money and the occupation of parents. She found no relationship between the age of the child and the granting of an allowance or between the amount of allowance and educational progress. She found that parents provided few experiences for borrowing or lending. Boys were provided more opportunity to learn investment practices, to earn money, and to learn the uses of money than girls.

Ojemann (1933) developed a plan to aid parents in helping children learn to use money. He advised that children be given money according to a well defined plan and that the amount increase as their responsibilities and age increase. He also recommended children share in general routine duties of the household without pay, and be given the opportunity to participate in family financial arrangements. A child should be allowed to suffer the consequences of unwise spending and should be given the opportunity to save.

Gavian (1938) studied children's experiences with money in the intermediate and upper grades. She found that nearly all the children had had some experiences with buying goods, with earning, and with saving. These experiences were very limited, and she surmised a need for parental education.

Hoffer (1949) surveyed the rural elementary school child's experiences with money in the areas of spending, giving, earning, borrowing, lending, and saving. She found that practically all the children had experienced spending and almost three-fourths had experienced giving. Almost two-thirds of the children had experienced earning, and approximately one-half had experienced lending. Two-fifths of the children had

experienced borrowing, while one-fifth had experienced saving.

Marshall and Magruder (1960) explored the effect of money education practices of parents on children's knowledge and use of money. Their major findings were presented as recommendations for parent money education practices (1960, pp. 282-283):

1. If children are given wide experiences in the use of money, they will have more knowledge of money and its use than children lacking such varied experiences.
2. Children will have more knowledge of money if they are given money to spend.
3. Children will have more knowledge of money if they save money.
4. Children will have more knowledge of and experience with money if their parents handle the family income wisely.
5. As the amount of money given to children at a specified age increases, there is an increase in the children's knowledge of the use of money.
6. There is no marked change with age in children's use of spending money.
7. If parent attitudes are not centered around money, children will have more knowledge of the use of money.

The practice of giving an allowance was studied by Marshall (1964). She found that there were no differences in financial knowledge and responsibility between children given an allowance and those not given an allowance. She did find that parents who give their children allowances differ in other practices and attitudes about money from parents who handle the problem of providing spending money for their children in other ways. "Allowance parents" provided children with a wider variety of experiences in using money, made the purposes of spending money clearer, gave their children more spending money, and encouraged children to earn money away from home more than "non-allowance" parents.

Changing Times (1972) suggests that teaching a child the wise use of money should begin with teaching him to be responsible in other areas such as household chores and care of clothing. The child learns through

his own mistakes, but does need enough information to help in making wise decisions. The best teacher of good money management is example. If children are to be good money managers, they must have a good model to follow.

The Need for Consumer Education for Preschool and School Age Children

Consumers comprise the largest group of people in this country; yet, very few are prepared for their membership in this group. Natella (1968) wrote that American educators have emphasized (1) producer-type education which is concerned with earning a living and (2) cultural education emphasizing enjoyment of arts. A third area, consumer education, has been neglected; the area which emphasizes preparation for an individual's life as a consumer. Goals of education should include developing skills in spending wisely in order to develop maximum use of buying power (Consumer Advisory Council, 1966).

Gavian (1938) stated there is a vast gap in the child's preparation for handling money. Harris and Harris (1964) indicated that youngsters living in the "affluent society" need specific guidance in the use of money. Peterson (1965) berated the adverse effects of advertising directed toward children. McNeal (1964) found negative feelings toward television commercials expressed by half the five- and seven-year olds. Despite their dislike for television commercials, over half the group studied, bought or asked their parents to buy goods they saw advertised.

Radar (1972) reported that elementary children as consumers . . . need to develop skills, knowledge, and judgment to perform their roles successfully in the marketplace. Generally children in the elementary

grades spend primarily for school supplies, snacks, and entertainment. Their experiences are usually limited to small purchases but offer opportunities to practice making economic decisions. Through these experiences, sound buying practices for both routine and major purchases of goods and services may be developed.

Collectively, young people are considered a 50-billion-dollar-a-year market. They not only spend their own money but influence the way adults spend money (Changing Times, 1972). Because the market is dominated by young people, it has become a necessity that they have experience and education to learn that money is not an end in itself, but a tool to help provide for the necessities and aesthetics of life. Through parental and school guidance, youngsters can learn to wield the powerful tool they hold (Wohlner, 1971).

Implications for Present Study

The findings from the literature that have implications for the present study are: (1) concept development is continuous and sequential, (2) adequate monetary concept development is dependent upon concrete experiences with money, (3) children are actively participating in the market place, (4) the need to develop meaningful curriculum in consumer practices for young children in present schools, and (5) the need for research to determine the levels of monetary competence of young children to assist in curriculum development.

CHAPTER III

METHOD AND PROCEDURE

The Monetary Concepts Task Test developed by McCarty (1967), and utilized by West (1971) with three- and four-year olds, by Dunkin (1972) with urban kindergarteners, and by Harper (1972) with rural kindergarteners, was used to determine the monetary concepts of the first grade children for this study. The score sheet used for the four tasks is included in the Appendix.

Subjects

The sample was composed of 120 kindergarten children and 138 first grade children enrolled in the Stillwater Public Schools. Table I presents subjects according to age, sex, and grade level.

TABLE I

CHILDREN BY AGE, SEX, AND GRADE LEVEL

Grade Level	Age*	Boys	Girls	Total
Kindergarteners	5.3-6.5 years	60	60	120
First Graders	5.11-7.4 years	72	66	138
Total		132	126	258

*Age is reported in years and months

Monetary Tasks

The Monetary Concepts Task Test developed by McCarty (1967) and further validated by West (1971), Dunkin (1972), Harper (1972), and Masters (1972) was used to determine the monetary concepts for the subjects in this study. Since Test I was achieved by most three-, four-, and five-year-old children (West, 1971; Dunkin, 1972; Harper, 1972; and Masters, 1972), only Tests II, III, and IV were used to obtain data from the six-year-olds. A description of the four tasks as reported by McCarty (1967) follows.

Test I--Money-Sorting Task

The purpose of the money-sorting task is to investigate children's ability to differentiate coins as money.

Materials needed: A small purse containing coins (half dollar, quarter, dime, nickel, and penny) and non-money objects (a plastic fifty-cent piece, a bracelet charm resembling money, a plastic dime, a tin dime, a bus token, and a plastic penny).

Procedure: The child is shown the purse and told, "I have some real pieces of money for a real store and some 'pretend pieces' for a 'pretend store.'" The coins and non-money objects are taken from the purse and shown to the child. He is then instructed to sort them by saying, "Put the real pieces of money for a real store over here /investigator indicates a place for the coins/ and put the 'pretend pieces' for a 'pretend store' over here." (Investigator indicates a place.)

The manner in which the child sorts the objects is recorded.

Test II--Coin-Identification Task

The purpose of the coin-identification task is to investigate children's ability to identify coins by name.

Materials needed: Two quarters, two half dollars, two dimes, three nickels, and two pennies.

Procedure: The coins are placed before the child in the following pattern:

25-10-50

10-5-1-5-25

1-50-5

The investigator says, "I have some real pieces of money on the table. Can you put your finger on a penny?" When the child responds, the investigator says, "Good." In this manner, the investigator directs the child either to put his finger on (a penny) or on a piece that is (one cent), in the following order:

1. A penny
2. A nickel
3. A dime
4. A half dollar
5. One cent
6. Five cents
7. Ten cents
8. Twenty-five cents
9. Fifty cents
10. A quarter
11. Ten cents
12. A nickel
13. Twenty-five cents
14. A half dollar
15. One cent
16. A dime
17. Fifty cents
18. A penny
19. Five cents
20. A quarter

The child's correct responses are recorded. The child is credited

with identifying the coin if both his responses are correct, e.g., two responses for a penny or two responses for one cent.

Test III--Comparative Value Task

The purpose of the comparative value task is to investigate children's ability to identify coins of greater and lesser value.

Materials needed: The half dollar, quarter, dime, nickel, and penny are paired twice in all possible combinations. The pairs are mounted on three by five cards so that the coin of greater value in each pair will appear once on the left and once on the right.

Procedure: The investigator asks the child, "Do you go to the store with your mother sometimes?" (Child responds.) "What do you buy?" (If candy is not mentioned, the investigator again asks, "Do you buy candy sometimes?") The child is then shown the first card of paired coins. The investigator instructs the child to choose the coin of greater value by saying, "Show me the coin that would buy the most candy at the store." In this manner, the investigator instructs the child to choose the coin of greatest value in each of the following pairs:

1. Half dollar--quarter
2. Dime--nickel
3. Penny--half dollar
4. Dime--quarter
5. Nickel--penny
6. Half dollar--dime
7. Quarter--nickel
8. Penny--dime
9. Nickel--half dollar
10. Quarter--penny
11. Dime--nickel
12. Half dollar--quarter
13. Penny--dime
14. Nickel--half dollar
15. Quarter--penny
16. Half dollar--dime
17. Nickel--penny
18. Dime--quarter

19. Penny--half dollar

20. Quarter--nickel

The child's choices are recorded on the score sheet.

Test IV--Equivalent Value Task

The purpose of the equivalent value task is to investigate children's ability to match coins with coins of equivalent value.

Materials needed: (1) A variety of small inexpensive toys; four were used for each child, and (2) a four-shelf rack on which the toys could be placed. A coin was glued to each shelf to indicate the price of the toy on that shelf (top shelf, nickel; second shelf, dime; third shelf, quarter; fourth shelf, half-dollar); (3) four small purses or containers; one containing seven pennies and one dime for matching the nickel; one containing three nickels and eleven pennies for matching the dime; one containing five nickels, three dimes and a half dollar for matching the quarter and one containing three quarters, seven dimes, six nickels and a penny for matching the half dollar. (It is helpful to match the color of the shelf to the color of the purse.)

Procedure: The child is shown four toys and the investigator instructs them to choose one by saying, "These are the toys I have in my store. You may choose one that you would like to buy." The investigator places the toy chosen by the child on the top shelf and puts the other toys out of sight.

The purse to be used in matching the nickel is given to the child. The investigator points to the toy saying, "Let us pretend that the (toy) costs this much (indicating the coin on that shelf). You may buy it with the money in this purse. Give me the money you would need to

buy the (toy)." (The investigator holds out her hand as if to accept the coins.) When the child chooses his coins the investigator records his choice and says, "Good. You could buy it with that purse, couldn't you? Now let us see if this purse will buy the (toy)?" (The purse for the dime is given to the child.) The investigator then moves the toy to the next shelf and says, "Now let us pretend that the (toy) costs this much" (indicating the dime). In this same manner, the child is requested to match the quarter and the half dollar with coins of equal value.

The child's choices are recorded on the score sheet.

CHAPTER IV

ANALYSIS OF DATA

The major purpose of this study was to compare the abilities of kindergarten and first grade children on the Monetary Concepts Task Test developed by McCarty (1967). Three subsidiary purposes were also examined: (1) to compare the responses of kindergarten boys and first grade boys to three of the Monetary Concepts Task Test, (2) to compare the responses of kindergarten girls and first grade girls to three of the Monetary Concepts Task Test, and (3) to compare the responses of first grade boys and first grade girls to three of the Monetary Concepts Task Test. The three monetary tasks which were measured in this test were: (1) the ability to identify coins, (2) the ability to identify the value of coins, and (3) the ability to determine equivalent values of coins.

Examination of Hypotheses and Discussion of Results

A chi square analysis was employed to compare the responses of kindergarten children and first grade children on three of the Monetary Concepts Task Test.

Hypothesis 1. There will be no significant differences between kindergarten children and first grade children in their responses to the three tasks of the Monetary Concepts Task Test: (a) to identify coins

by name, (b) to identify the value of coins, and (c) to determine equivalent values of coins.

Table II reveals that first graders on the coin-identification tasks are significantly more advanced than kindergarten children. The only coins that the kindergarten children identified as often as the first grade children were the penny, nickel, and dime. On the comparative value task, kindergarten children understood the tasks almost equally as well as the first grade children. There were only four paired coins on which the first graders showed greater understanding than the kindergarten children. These were a comparison of fifty cents with the dime; quarter with the nickel; and the dime with a penny. Although the percentage of first graders who were able to handle the equivalent value task successfully was low, there was a significant difference between kindergarten children and first grade children in their correct responses to the task on all four items with the first graders reflecting a superior performance.

Hypothesis 2. There will be no significant differences between first grade boys and kindergarten boys in their responses to three tasks of the Monetary Concepts Task Test: (a) to identify coins by name, (b) to identify the value of coins, and (c) to determine equivalent values of coins.

The data in Table III reveal that first grade boys are significantly more advanced than kindergarten boys in their ability to identify coins. The kindergarten boys were able to identify the common names of coins equally as well as first grade boys. Regarding the comparative value task there were only three items on the paired coins that the kindergarten boys did not respond to correctly as often as the first

TABLE II

PERCENTAGES AND CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN KINDERGARTEN AND FIRST GRADE CHILDREN'S RESPONSES TO THE MONETARY CONCEPTS TASK TEST

Item	Percentage of Correct Responses		X^2	Level of Significance
	Kindergarten (N = 120)	First Grade (N = 138)		
COIN-IDENTIFICATION TASK				
(1) Half Dollar	60	80	11.07	.001
(2) Quarter	30	48	7.80	.01
(3) Dime	63	72	1.71	n.s.
(4) Nickel	63	62	.03	n.s.
(5) Penny	94	97	.73	n.s.
(6) Fifty Cents	13	28	8.70	.01
(7) Twenty-Five Cents	13	41	23.98	.001
(8) Ten Cents	28	68	40.75	.001
(9) Five Cents	28	57	20.88	.001
(10) One Cent	38	68	21.76	.001
COMPARATIVE VALUE TASK				
Paired Coins				
(11) 50¢-25¢	92	94	.31	n.s.
(12) 50¢-10¢	85	95	7.41	.01
(13) 50¢-5¢	86	94	4.22	n.s.
(14) 50¢-1¢	86	95	5.26	n.s.
(15) 25¢-10¢	88	92	.62	n.s.
(16) 25¢-50¢	90	95	1.62	n.s.
(17) 10¢-50¢	87	93	1.99	n.s.
(18) 5¢-50¢	90	94	1.05	n.s.

TABLE II (Continued)

Item	Percentage of Correct Responses		X^2	Level of Significance
	Kindergarten (N = 120)	First Grade (N = 138)		
(19) 1¢-50¢	88	94	2.77	n.s.
(20) 10¢-25¢	88	93	1.50	n.s.
(21) 25¢-5¢	83	95	8.01	.01
(22) 25¢-1¢	92	95	.64	n.s.
(23) 10¢-5¢	23	34	3.08	n.s.
(24) 10¢-1¢	63	89	24.03	.001
(25) 5¢-25¢	95	96	.06	n.s.
(26) 5¢-25¢	87	94	3.48	n.s.
(27) 1¢-25¢	88	96	4.97	n.s.
(28) 5¢-10¢	18	30	3.90	n.s.
(29) 1¢-10¢	66	88	17.71	.001
(30) 1¢-5¢	92	96	1.81	n.s.
EQUIVALENT VALUE TASK				
(31) Half Dollar	6	28	19.52	.001
(32) Quarter	7	19	7.28	.01
(33) Dime	20	51	24.85	.001
(34) Nickel	18	46	21.90	.001

TABLE III

PERCENTAGES AND CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN KINDERGARTEN AND FIRST GRADE BOYS' RESPONSES TO THE MONETARY CONCEPTS TASK TEST

Item	Percentage of Correct Responses: Kindergarten Boys (N = 60)	Percentage of Correct Responses: First Grade Boys (N = 72)	X^2	Level of Significance
COIN-IDENTIFICATION TASK				
(1) Half Dollar	65	79	2.64	n.s.
(2) Quarter	30	46	2.83	n.s.
(3) Dime	57	67	.99	n.s.
(4) Nickel	67	57	1.26	n.s.
(5) Penny	93	97	.42	n.s.
(6) Fifty Cents	15	38	7.26	.01
(7) Twenty-Five Cents	13	46	14.66	.001
(8) Ten Cents	28	74	25.15	.001
(9) Five Cents	33	61	9.34	.01
(10) One Cent	42	74	12.52	.001
COMPARATIVE VALUE TASK				
Paired Coins				
(11) 50¢-25¢	93	93	.08	n.s.
(12) 50¢-10¢	85	96	3.43	n.s.
(13) 50¢-5¢	92	93	.00	n.s.
(14) 50¢-1¢	87	97	3.81	n.s.
(15) 25¢-10¢	92	90	.00	n.s.
(16) 25¢-50¢	92	94	.08	n.s.
(17) 10¢-50¢	92	93	.00	n.s.
(18) 5¢-50¢	93	96	.06	n.s.

TABLE III (Continued)

	Item	Percentage of Correct Responses: Kindergarten Boys (N = 60)	Percentage of Correct Responses: First Grade Boys (N = 72)	X^2	Level of Significance
(19)	1¢-50¢	92	93	.00	n.s.
(20)	10¢-25¢	90	96	.95	n.s.
(21)	25¢-5¢	82	94	4.11	n.s.
(22)	25¢-1¢	93	96	.06	n.s.
(23)	10¢-5¢	22	44	6.57	.05
(24)	10¢-1¢	62	92	15.48	.001
(25)	5¢-1¢	98	99	.34	n.s.
(26)	5¢-25¢	90	94	.40	n.s.
(27)	1¢-25¢	87	97	3.80	n.s.
(28)	5¢-10¢	17	32	3.30	n.s.
(29)	1¢-10¢	63	90	12.33	.001
(30)	1¢-5¢	93	97	.42	n.s.
EQUIVALENT VALUE TASK					
(31)	Half Dollar	10	35	9.80	.01
(32)	Quarter	7	26	7.53	.01
(33)	Dime	20	53	13.58	.001
(34)	Nickel	17	50	14.58	.001

grade boys. There were significant differences between kindergarten boys and first grade boys in their responses to the equivalent value tasks with first grade boys giving a significantly higher proportion of correct responses.

Hypothesis 3. There will be no significant differences between kindergarten girls and first grade girls in their responses to three of the Monetary Concepts Task Test: (a) to identify coins by name, (b) to identify the value of coins, and (c) to determine the equivalent values of coins.

Table IV indicates that first grade girls are significantly more advanced than kindergarten girls in their ability to identify coins on six items which were the half dollar, quarter, twenty-five cent piece, ten cent piece, five cent piece, and one cent piece. In the paired coins task, there were only two items which the kindergarten girls did not respond to correctly as often as the first grade girls, i.e., the dime compared with the penny and this item was missed on two comparisons. There were significant differences between kindergarten girls and first grade girls in their responses to the equivalent value task on three of the four items, i.e., the half dollar, the dime, and the nickel with first grade girls giving a higher proportion of correct responses. Both kindergarten and first grade girls knew the equivalent value of the quarter.

Hypothesis 4. There will be no significant differences between first grade boys and first grade girls in their responses to three tasks of the Monetary Concepts Task Test: (a) to identify coins, (b) to identify the value of coins, and (c) to determine equivalent values of coins.

TABLE IV

PERCENTAGES AND CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN KINDERGARTEN AND FIRST GRADE GIRLS' RESPONSES TO THE MONETARY CONCEPTS TASK TEST

Item	Percentage of Correct Responses: Kindergarten Girls (N = 60)	Percentage of Correct Responses: First Grade Girls (N = 66)	X^2	Level of Significance
COIN IDENTIFICATION TASK				
(1) Half Dollar	55	80	8.16	.01
(2) Quarter	30	50	4.42	.05
(3) Dime	70	77	.52	n.s.
(4) Nickel	60	68	.59	n.s.
(5) Penny	95	97	.01	n.s.
(6) Fifty Cents	10	18	1.11	n.s.
(7) Twenty-Five Cents	12	35	8.08	.01
(8) Ten Cents	27	62	14.55	.001
(9) Five Cents	22	52	10.73	.01
(10) One Cent	35	62	8.20	.01
COMPARATIVE VALUE TASK				
Paired Coins				
(11) 50¢-25¢	90	95	.71	n.s.
(12) 50¢-10¢	85	95	2.87	n.s.
(13) 50¢-5¢	80	95	5.76	n.s.
(14) 50¢-1¢	85	85	1.08	n.s.
(15) 25¢-10¢	85	94	.07	n.s.
(16) 25¢-50¢	88	95	1.32	n.s.
(17) 10¢-50¢	82	92	2.38	n.s.
(18) 5¢-50¢	87	92	.59	n.s.

TABLE IV (Continued)

	Item	Percentage of Correct Responses: Kindergarten Girls (N = 60)	Percentage of Correct Responses: First Grade Girls (N = 66)	X^2	Level of Significance
(19)	1¢-50¢	83	95	3.77	n.s.
(20)	10¢-25¢	87	91	.22	n.s.
(21)	25¢-5¢	85	95	2.87	n.s.
(22)	25¢-1¢	90	94	.24	n.s.
(23)	10¢-5¢	25	23	.01	n.s.
(24)	10¢-1¢	63	86	7.79	.01
(25)	5¢-1¢	92	94	.02	n.s.
(26)	5¢-25¢	83	94	2.59	n.s.
(27)	1¢-25¢	90	95	.71	n.s.
(28)	5¢-10¢	20	27	.56	n.s.
(29)	1¢-10¢	68	86	4.91	.05
(30)	1¢-5¢	90	95	.71	n.s.
EQUIVALENT VALUE TASK					
(31)	Half Dollar	2	20	8.60	.01
(32)	Quarter	7	11	.22	n.s.
(33)	Dime	20	48	10.00	.01
(34)	Nickel	18	41	6.57	.05

The data reveal that first grade boys and first grade girls are alike in their responses to the money tasks. Of the 34 items in the three tasks, only two significant differences in boys' and girls' responses were found, i.e., recognition of the fifty cent piece and the equivalent value of the quarter with other coins, with boys giving a significantly higher proportion of correct responses to both of the specific tasks.

TABLE V

PERCENTAGES AND CHI SQUARE VALUES REFLECTING DIFFERENCES BETWEEN FIRST GRADE BOYS' AND FIRST GRADE GIRLS' RESPONSES TO THE MONETARY CONCEPTS TASK TEST

Item	Percentage of Correct Responses: First Grade Boys (N = 60)	Percentage of Correct Responses: First Grade Girls (N = 66)	X^2	Level of Significance
COIN IDENTIFICATION TASK				
(1) Half Dollar	79	80	.00	n.s.
(2) Quarter	46	50	.10	n.s.
(3) Dime	67	77	1.42	n.s.
(4) Nickel	56	68	1.82	n.s.
(5) Penny	97	97	.18	n.s.
(6) Fifty Cents	38	18	5.42	.05
(7) Twenty-Five Cents	46	35	1.30	n.s.
(8) Ten Cents	74	62	1.60	n.s.
(9) Five Cents	61	52	.93	n.s.
(10) One Cent	74	62	1.60	n.s.
COMPARATIVE VALUE TASK				
Paired Coins				
(11) 50¢-25¢	93	95	.06	n.s.
(12) 50¢-10¢	96	95	.10	n.s.
(13) 50¢-5¢	93	95	.06	n.s.
(14) 50¢-1¢	97	92	.80	n.s.
(15) 25¢-10¢	90	94	.23	n.s.
(16) 25¢-50¢	94	95	.01	n.s.
(17) 10¢-50¢	93	92	.03	n.s.
(18) 5¢-50¢	96	92	.24	n.s.

TABLE V (Continued)

	Item	Percentage of Correct Responses: First Grade Boys (N = 60)	Percentage of Correct Responses: First Grade Girls (N = 66)	X^2	Level of Significance
(19)	1¢-50¢	93	95	.06	n.s.
(20)	10¢-25¢	96	91	.68	n.s.
(21)	25¢-5¢	94	95	.01	n.s.
(22)	25¢-1¢	96	94	.01	n.s.
(23)	10¢-5¢	44	23	6.30	n.s.
(24)	10¢-1¢	92	86	.53	n.s.
(25)	5¢-1¢	99	94	1.02	n.s.
(26)	5¢-25¢	94	94	.06	n.s.
(27)	1¢-25¢	97	95	.01	n.s.
(28)	5¢-10¢	32	27	.55	n.s.
(29)	1¢-10¢	90	86	.20	n.s.
(30)	1¢-5¢	97	95	.01	n.s.
EQUIVALENT VALUE TASK					
(31)	Half Dollar	35	20	3.18	n.s.
(32)	Quarter	26	11	4.62	.05
(33)	Dime	53	48	.11	n.s.
(34)	Nickel	50	41	.81	n.s.

CHAPTER V

SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

This study was designed to compare the responses of kindergarten and first grade children to three of the tasks on the Monetary Concepts Task Test developed by McCarty (1967), and to test the hypothesis that there are no significant differences between the monetary concepts of first grade children and kindergarten children.

The subjects for this study were 120 kindergarten children and 138 first grade children enrolled in the Stillwater Public Schools. Testing was conducted during the spring semester, 1972; fall semester, 1972; and spring semester, 1973.

The researcher followed the procedures developed by McCarty (1967) for use of three monetary concepts tasks which were: Test II--Coin-Identification Task; Test III--Comparative Value Task; and Test IV--Equivalent Value Task.

The data were reported by number of correct responses. A chi square analysis was utilized to compare the responses of kindergarten children and first grade children, of kindergarten boys and first grade boys, of kindergarten girls and first grade girls, and of first grade boys and first grade girls to three of the tasks on the Monetary Concepts Task Test.

Findings

1. First graders were significantly more advanced than kindergarten children in their ability to identify coins. The penny, nickel, and dime were the only coins the kindergarten children knew as well as the first grade children.

2. Kindergarten children responded correctly almost equally as well as first grade children on the comparative value tasks.

3. There were significant differences between the kindergarten children and first grade children in their responses to the equivalent value task section; although both groups made few correct responses. The low percentage of correct responses of first grade children to the equivalent value task section suggests that materials in the section would be valuable to include in the programs designed for first grade children.

4. Significant differences were found between first grade boys' and first grade girls' responses to only two of the 34 items in the three tasks.

Implications

1. The same first grade curriculum can be planned for both boys and girls.

2. First grade children are more advanced than kindergarten children in their concepts of equivalent values of coins; however, the low number of correct responses indicates that specific learning experiences should be provided on the first grade level to develop these concepts.

3. First graders need more experiences in manipulating coins; that

is, they need more opportunity to become familiar with the size and weight of coins.

4. First grade children seem to be motivated to learn about money if concrete experiences are provided.

Recommendations for Further Research

The following suggestions are made on the basis of the findings of this study.

1. Study children older than those in the first grade to determine at which level each of the monetary concepts on the Monetary Concepts Task Test is attained.

2. The curriculum in consumer education should be examined in pre-school and elementary schools to determine what concepts are being taught, as well as what should be included in the educational programs.

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SCORE SHEET

NAME

AGE

DATE

TEST I--MONEY-SORTING TASK

Money Items						Non-Money Items					
50	25	10	5	1	1	p50	C	p10	t10	BT	p1

*Check each object correctly sorted as a money-non-money item.

TEST II--COIN IDENTIFICATION TASK

Half Dollar	Quarter	Dime	Nickel	Penny	50	25	10	5	1

*Step one - Check each coin correctly identified.
Step two - Circle each coin correctly identified.

TEST III--COMPARATIVE VALUE TASK

50	25	25	50	25	5	5	25
50	10	10	50	25	1	1	25
50	5	5	50	10	5	5	10
50	1	1	50	10	1	1	10
25	10	10	25	5	1	1	5

*Check the coin chosen in each pair.

TEST IV--EQUIVALENT VALUE TASK

COIN	CORRECT RESPONSE	INCORRECT RESPONSE
Half Dollar		
Quarter		
Dime		
Nickel		

VITA

Jo Ann Dale

Candidate for the Degree of

Master of Science

Thesis: COMPARISON OF MONETARY CONCEPTS OF KINDERGARTEN CHILDREN AND FIRST GRADE CHILDREN

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