

A COMPARISON OF MONETARY CONCEPTS OF  
FIRST GRADE CHILDREN AND  
THIRD GRADE CHILDREN

By

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THIRD GRADE CHILDREN

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TO  
My loving husband, Steve

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## CHAPTER I

### THE PROBLEM AND ITS IMPORTANCE

This study was concerned with the monetary concepts of children enrolled in third grade of public schools. A Monetary Concepts Task Test was developed and validated for three- and four-year-olds (McCarty, 1967), urban kindergarten age children (Dunkin, 1972), rural kindergarten age children (Harper, 1972), low income black children (Masters, 1972), and first grade children (Dale, 1973). Children from the ages of three through six years showed difficulty with the last three parts of the Monetary Concepts Task Test; therefore, eight-year-old children were tested to determine if they had achieved these monetary concepts.

#### Need for the Study

Children of today are involved in the consumer process. They become involved in "consumerism" at an earlier age than in previous years. "Consumerism" is the focal point of many television commercials, billboards, and newspaper advertisements, which induce children to want certain products. Candy, cereal, toys, gum, books, and other items are manufactured for the child; and are advertised to the child, expecting him to use his influence to make requests of his parents and other adults who may be involved in the buying process. Since the child is involved in spending, either directly through his own purchases or indirectly through influencing his parents' purchases, there is a

definite need for the child to have basic understandings of monetary concepts. Studies by McCarty (1967), Dunkin (1972), Harper (1972), Masters (1972), and Dale (1973) involving basic monetary concepts, found children from the ages of three to six years to be lacking in some of the basic monetary concepts tested on the Monetary Concepts Task Test.

#### Assumption

The majority of the items on the money-sorting task of the Monetary Concepts Task Test were identified correctly by urban, kindergarten children (Dunkin, 1972). This suggests that this section of the test does not provide information for curriculum for kindergarten children. Harper (1972) recommended that Test I--Money-Sorting Task--be omitted when testing children over five years of age, and that testing begin with Test II--Coin Identification Task.

The assumption was therefore made that urban first grade children could correctly identify the items on the money-sorting test and hence it was not given to first grade children by Dale (1973). The monetary tasks that were measured 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.

Since the assumption was made that first grade children could correctly identify the items on the money-sorting task, this section of the test was not given to third grade children in this study. The three monetary tasks that were measured are: (1) ability to identify coins, (2) ability to identify value of coins, and (3) ability to determine equivalent values of coins.



### Purpose of the Study

The purpose of this study was to compare the abilities of first grade children and third grade children on three tasks of the Monetary Concepts Task Test developed by McCarty (1967). Subsidiary comparisons which were made were: (1) comparison of responses of first grade boys and third grade boys to three tasks of the Monetary Concepts Task Test, (2) comparison of responses of first grade girls and third grade girls to three tasks of the Monetary Concepts Task Test, and (3) comparison of responses of third grade girls and third grade boys to three tasks of the Monetary Concepts Task Test.

The three monetary tasks which were measured in this study 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 is no significant difference between first grade children and third 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 is no significant difference between first grade boys and third grade 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 is no significant difference between first grade girls and third 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 is no significant difference between third grade girls and third grade boys in their responses to three tasks of the Monetary Concepts Task Test:
- (a) to identify coins by name
  - (b) to identify the values of coins
  - (c) to determine equivalent values of coins.

## CHAPTER II

### RELATED LITERATURE

The literature related to the monetary experiences and consumer practices of the school age child is presented in the following categories: (1) Development of Monetary Concepts, (2) Monetary Concepts of the Primary School Age Child, (3) The Primary School Age Child's Knowledge of and Experience with Money, (4) The Need for Consumer Education in the Primary School, and (5) Implications for the Present Study.

#### Development of Monetary Concepts

The child learns at an early age that money plays an important role in life (King, 1946). He develops a desire for money as he becomes aware of the value adults attach to it (Neisser, 1970). The child's skills, knowledge and attitudes concerning money are derived from a variety of sources, the most important of which is the family (Pope, 1965).

Strauss (1952) found that children could distinguish between money and non-money objects as early as three years of age. Children of three and four years of age may divide coins into separate piles of copper and silver coins. They could not, however, consistently match pairs of coins. If asked to choose between two coins, their selection was based on chance or the relative size of the coin.

Robison (1964) tested 25 children in each of two groups of five-year-olds from high socio-economic status on their ability to identify six denominations of money before and after a ten week period of planned experiences in consumerism. Four children in each group could identify all of the money which included a dollar bill, a check, a quarter, a dime, a nickel, and a penny, while four children in each group identified correctly five out of six items. After the ten weeks of planned experiences 15 children in the experimental group, in addition to the four who maintained a perfect score in pretesting, showed an increase on money identification tests, and ten children were able to identify all six types of money. The control groups score remained unchanged.

Strauss and Schuessler (1951) found that between the ages of four years, eight months and five years, eleven months children are capable of distinguishing nickels from other coins. His preference is based on rote memory or upon the coins greater size. He now understands that money has to do with buying, but at this stage of development any coin will buy anything. Preschoolers merely imitate adult processes without really understanding money's function (Pope, 1965). McCarty (1961) found that children's ability (1) to identify coins as money, (2) to identify coins by name, and (3) to identify the comparative value of coins increases with age.

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

Danziger (1958) tested 41 Australian school children between the ages of five and eight years. They were asked a series of ten questions dealing with various economic processes. He found that four stages occur in the development of economic concepts which were:

(1) pre-categorical stage occurs when the child lacks economic categories of thought altogether; (2) categorical stage when the child's concepts appear to represent a reality in terms of isolated acts which are explained by moral or voluntaristic imperative; (3) the child becomes able to conceptualize relationships as such, by virtue of the fact that a reciprocity is established between previously isolated acts; and (4) isolated relationships become linked to each other so as to form a system of relations. (pp. 231-240)

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

### Monetary Concepts of the Primary

#### School Age Child

Eliot (1932) and Neisser (1960) suggest that the emotional climate of the home is instrumental in the development of the child's attitudes toward money. Wohlner (1971) points out that attitudes about money are closely linked with character and personality; and that the child absorbs his parents attitudes about money.

Gruenberg and Gruenberg (1937) state that although the child does not need money during his early years, it is at this time that he is being impressed with fixed ideas and attitudes regarding money.

Dunsing (1956) suggests that boys' and girls' experiences in acquiring and spending money during childhood, will influence their abilities of

handling money in a desirable way in adolescence and adulthood. The need for understanding the meaning and use of money as well as for the acquisition of sound attitudes concerning money is great for every child (Gruenberg, 1926).

Hurlock (1964) reported that the six-year-old can name pennies, nickels, dimes; the seven-year-old knows what a quarter is and possibly how many pennies are in a quarter; and that an eight and one-half year old can, using complex combinations, match equivalent amounts with different coins. Variations in children's concepts of money result from differences in learning experiences. The manner in which the child uses money is more important than the amount of money he has to spend.

Money becomes a part of the child's consciousness long before he understands how to use it (Gruenberg, 1965). The child learns by doing and he must be free to make mistakes (Wohlner, 1971). Money plays an important role in social and emotional adjustment as well as in the development of values (Neisser, 1960).

#### The Primary School Age Child's Knowledge of and Experience with Money

Andrews (1932) suggested that parents should share their money experiences with their children. Gruenberg (1932) reported that the child needs money in order to become familiar with it, and to learn its peculiarities, limitations, and potentialities. If they do not have the money with which to make instructive mistakes while they are young, they fail to learn these essential lessons in the use of money.

Ojemann (1933) advised that children be given money according to

a well defined plan and that the amount of money should increase as their age and responsibilities increase. He also recommended that the child share in the household duties without pay, be given the opportunity to participate in family financial arrangements, be allowed to suffer the consequences of unwise spending, and be given the opportunity to save.

Hanson (1933) found that boys were provided more opportunity to learn investment practices, to earn money, and to learn the uses of money than girls. Prevey (1945) substantiates this theory in her study in which she found that boys scored significantly higher than girls in the use of money and later money habits. She concluded that there is a definite relationship between childhood experiences and later money management ability, that boys are provided with more valuable experiences than girls, and that parent training practices positively relate to later ability to utilize financial resources.

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

Marshall (1964) found that parents who provided their children with an allowance also provided a wider variety of experiences in using money, made the purposes of spending money clearer, gave their children more money, and encouraged their children to earn money away from home more than did parents who did not provide their children with an allowance.

The importance of providing children with money they can use as a

tool in developing consumer awareness and competency has been stressed by many authors (Andrews, 1932; Danziger, 1959; Eliot, 1932, Gavian, 1939; Gruenberg, 1932; Ojemann, 1933; Prevey, 1945; Wohlner, 1971). The child is spending long before he is earning either directly through his own management or indirectly through his parents' management (Gruenberg, 1965).

Teaching a child to be responsible in other areas is the starting point in teaching him the wise use of money. He learns through experience and through his own mistakes, however, he does need enough information to help him make wise decisions. Children need a good model to follow if they are to be good money managers (Changing Times, 1972).

#### The Need for Consumer Education in the Primary School

Children today live in an "affluent society" and they need specific guidance in the use of money (Harris and Harris, 1964). American educators have emphasized (1) a producer-type education which is concerned with earning a living and (2) cultural education which emphasizes an enjoyment of the arts. They have, however, neglected a third area of education, consumer education (Natella, 1968).

Although consumers comprise the largest group of people in the country, very few are prepared for their membership in this group. Rader (1972) reported that elementary school children lack the skills, knowledge, and judgment to perform their roles successfully in the marketplace. Their experiences are generally limited to small purchases, but these offer opportunities to practice making sound economic decisions.



According to Changing Times (1972) young people are considered a 50-billion-dollar-a-year market. Only through school and parental guidance can youngsters learn to use the powerful tool they hold (Wohlner, 1971).

#### Implications for the Present Study

The findings from the literature that have implications for the present study are: (1) that monetary concepts develop continuously and sequentially, (2) the development of monetary concepts is dependent upon adequate concrete experiences with money, (3) all children have experiences of some type with money, (4) there is a need for curriculum development in the area of consumer education in the primary school, and (5) research is needed to determine the monetary competence of school age children to aid in consumer education 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, by Harper (1972) with rural kindergarteners, and by Dale (1973) with first grade children, was used to determine the monetary concepts of third grade children in this study. The score sheet used for the four tasks is included in the Appendix.

#### Subjects

The sample was composed of Dale's (1973) sample of 138 first grade children and 239 third grade children enrolled in the Stillwater Public Schools. Table I presents information concerning subjects according to age, sex, and grade level.

TABLE I  
CHILDREN BY AGE, SEX, AND GRADE LEVEL

Grade Level	Age*	Boys	Girls	Total
First Graders	5.11-7.4 years	72	66	138
Third Graders	7.2-10.0 years	122	117	239
Total		194	183	377

\*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), Masters (1972), and Dale (1973) 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 eight-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 the child'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           | 11. Ten cents         |
| 2. A nickel          | 12. A nickel          |
| 3. A dime            | 13. Twenty-five cents |
| 4. A half dollar     | 14. A half dollar     |
| 5. One cent          | 15. One cent          |
| 6. Five cents        | 16. A dime            |
| 7. Ten cents         | 17. Fifty cents       |
| 8. Twenty-five cents | 18. A penny           |
| 9. Fifty cents       | 19. Five cents        |
| 10. A quarter        | 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 greatest value in each of the following pairs:

- |                          |                           |
|--------------------------|---------------------------|
| 1. Half dollar - quarter | 11. Dime - nickel         |
| 2. Dime - nickel         | 12. Half dollar - quarter |
| 3. Penny - half dollar   | 13. Penny - dime          |
| 4. Dime - quarter        | 14. Nickel - half dollar  |
| 5. Nickel - penny        | 15. Quarter - penny       |
| 6. Half dollar - dime    | 16. Half dollar - dime    |
| 7. Quarter - nickel      | 17. Nickel - penny        |
| 8. Penny - dime          | 18. Dime - quarter        |
| 9. Nickel - half dollar  | 19. Penny - half dollar   |
| 10. Quarter - penny      | 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. (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's 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's 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 first grade and third grade children on the Monetary Concepts Task Test developed by McCarty (1967). Three subsidiary purposes were also examined: (1) comparison of responses of first grade boys and third grade boys to three tasks of the Monetary Concepts Task Test, (2) comparison of responses of first grade girls and third grade girls to three tasks of the Monetary Concepts Task Test, and (3) comparison of responses of third grade girls and third grade boys to three tasks of the Monetary Concepts Task Test. The three monetary tasks which were measured in this test 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.

#### Examination of Hypotheses and

#### Discussion of Results

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

Hypothesis 1. There is no significant difference between first grade children and third 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 third grade children were significantly more advanced than first graders on the coin-identification tasks, the comparative value tasks, and the equivalent value tasks. The only coin that the first graders identified as often as the third grade children was the penny. There were only three paired coins on which there was no significant difference between first and third grade children. Almost all of both groups accomplished this task correctly. These comparisons were the half dollar with the dime; the quarter with the dime; and the dime with the quarter. Although the difference was not significant, the percentage of first grade children giving the correct response was higher for the quarter with the dime than the third grade children giving the correct response. The percentage of third graders who were able to handle the equivalent value task was significantly higher than the percentage of first graders who were able to handle the tasks, but it is evident that third graders still need additional skills in this area. Since third graders achieved at a significantly higher level of competence than did first graders, this null hypothesis was rejected.

Hypothesis 2. There is no significant difference between first grade boys and third grade 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.

Table III reveals that third grade boys are significantly more advanced in their ability to identify coins than first grade boys.

TABLE II

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

Item	Percentage of Correct Responses		$\chi^2$	Level of Significance
	First Grade (N = 138)	Third Grade (N = 239)		
<b>COIN-IDENTIFICATION TASK</b>				
(1) Half Dollar	80	98	34.03	.001
(2) Quarter	48	91	86.30	.001
(3) Dime	72	96	45.06	.001
(4) Nickel	62	93	56.73	.001
(5) Penny	97	100	2.44	n. s.
(6) Fifty cents	28	97	143.48	.001
(7) Twenty five cents	41	92	118.21	.001
(8) Ten cents	68	99	72.43	.001
(9) Five cents	57	97	95.68	.001
(10) One cent	68	99	75.85	.001
<b>COMPARATIVE VALUE TASK</b>				
(11) 50¢-25¢	94	100	8.68	.01
(12) 50¢-10¢	95	99	3.64	n. s.
(13) 50¢-5¢	94	99	6.53	.02
(14) 50¢-1¢	95	100	7.02	.01
(15) 25¢-10¢	92	87	2.03	n. s.
(16) 25¢-50¢	95	100	7.02	.01
(17) 10¢-50¢	93	99	9.68	.01
(18) 5¢-50¢	94	100	8.68	.01

TABLE II (Continued)

Item	Percentage of Correct Responses		$X^2$	Level of Significance
	First Grade (N = 138)	Third Grade (N = 239)		
(19) 1¢-50¢	94	100	8.68	.01
(20) 10¢-25¢	93	93	.01	n.s.
(21) 25¢-5¢	95	99	5.04	.05
(22) 25¢-1¢	95	100	7.02	.01
(23) 10¢-5¢	34	85	101.17	.001
(24) 10¢-1¢	89	100	21.01	.001
(25) 5¢-1¢	96	100	3.87	.05
(26) 5¢-25¢	94	99	4.87	.05
(27) 1¢-25¢	96	100	3.87	.05
(28) 5¢-10¢	30	80	91.06	.001
(29) 1¢-10¢	88	100	22.85	.001
(30) 1¢-5¢	96	100	3.87	.05
EQUIVALENT VALUE TASK				
(31) Half Dollar	28	81	102.18	.001
(32) Quarter	19	86	162.36	.001
(33) Dime	51	95	97.07	.001
(34) Nickel	46	90	88.66	.001

TABLE III

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

Item	Percentage of Correct Responses		$X^2$	Level of Significance
	First Grade Boys (N = 72)	Third Grade Boys (N = 122)		
<b>COIN-IDENTIFICATION TASK</b>				
(1) Half Dollar	79	98	18.53	.001
(2) Quarter	46	94	56.06	.001
(3) Dime	67	96	28.18	.001
(4) Nickel	56	94	39.86	.001
(5) Penny	97	99	.22	n.s.
(6) Fifty cents	38	90	58.01	.001
(7) Twenty-five cents	46	95	58.91	.001
(8) Ten cents	74	98	26.23	.001
(9) Five cents	61	98	42.08	.001
(10) One cent	74	100	32.77	.001
<b>COMPARATIVE VALUE TASK</b>				
(11) 50¢-25¢	93	100	6.15	.02
(12) 50¢-10¢	96	100	2.79	n.s.
(13) 50¢-5¢	93	98	3.81	n.s.
(14) 50¢-1¢	97	100	1.24	n.s.
(15) 25¢-10¢	90	84	1.17	n.s.
(16) 25¢-50¢	94	100	4.44	.05
(17) 10¢-50¢	93	100	6.15	.02

TABLE III (Continued)

Item	Percentage of Correct Responses		$\chi^2$	Level of Significance
	First Grade Boys (N = 72)	Third Grade Boys (N = 122)		
(18) 5¢-50¢	96	100	2.79	n. s.
(19) 1¢-50¢	93	100	6.15	.02
(20) 10¢-25¢	96	93	.35	n. s.
(21) 25¢-5¢	94	99	2.38	n. s.
(22) 25¢-1¢	96	100	2.79	n. s.
(23) 10¢-5¢	44	88	39.61	.001
(24) 10¢-1¢	92	99	5.35	.05
(25) 5¢-1¢	99	100	.07	n. s.
(26) 5¢-25¢	94	98	1.19	n. s.
(27) 1¢-25¢	97	100	1.24	n. s.
(28) 5¢-10¢	32	84	52.50	.001
(29) 1¢-10¢	90	100	9.67	.01
(30) 1¢-5¢	97	100	1.24	n. s.
EQUIVALENT VALUE TASK				
(31) Half Dollar	35	84	45.72	.001
(32) Quarter	26	90	79.82	.001
(33) Dime	53	97	63.58	.001
(34) Nickel	50	93	46.28	.001

The penny was the only coin that first grade boys could identify as often as third grade boys. Regarding the Comparative Value Task, there were eight sets of coins on which the third grade boys were significantly more advanced than the first grade boys. These comparisons were the fifty cents with the quarter; the quarter with the fifty cents; the dime with the nickel; the dime with the penny, the nickel with the dime; and the penny with the dime. On the remaining combinations of coins the first grade boys were able to identify the coin of largest value equally as well as the third grade boys. The third grade boys were significantly more advanced in their ability to determine equivalent values of coins than were the first grade boys. The percentage of correct responses from the third grade boys, however, show that additional skills are needed in this area. This null hypothesis was rejected because third grade boys achieved at a significantly higher level of competence than first grade boys.

Hypothesis 3. There is no significant difference between first grade girls and third 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, and (c) to determine equivalent values of coins.

The data in Table IV indicate that third grade girls are significantly more advanced in their ability to identify coins than are first grade girls. The penny was the only coin identified as often by the first grade girls as by the third grade girls.

The third grade girls were significantly more advanced than the first grade girls on the following paired coins of the comparative value task: half dollar with the penny; nickel with the half dollar; the dime

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

Item	Percentage of Correct Responses		$\chi^2$	Level of Significance
	First Grade Girls (N = 66)	Third Grade Girls (N = 117)		
COIN IDENTIFICATION TASK				
(1) Half Dollar	80	97	13.45	.001
(2) Quarter	50	88	30.02	.001
(3) Dime	77	97	14.90	.001
(4) Nickel	68	92	16.20	.001
(5) Penny	97	100	1.33	n. s.
(6) Fifty cents	18	88	85.21	.001
(7) Twenty-five cents	35	90	57.91	.001
(8) Ten cents	62	99	44.47	.001
(9) Five cents	52	97	51.42	.001
(10) One cent	62	98	41.06	.001
COMPARATIVE VALUE TASK				
(11) 50¢-25¢	95	99	1.24	n. s.
(12) 50¢-10¢	95	98	.43	n. s.
(13) 50¢-5¢	95	99	1.24	n. s.
(14) 50¢-1¢	85	99	4.08	.05
(15) 25¢-10¢	94	90	.48	n. s.
(16) 25¢-50¢	95	99	1.24	n. s.
(17) 10¢-50¢	92	98	2.51	n. s.

TABLE IV (Continued)

Item	Percentage of Correct Responses		$\chi^2$	Level of Significance
	First Grade Girls (N = 66)	Third Grade Girls (N = 117)		
(18) 5¢-50¢	92	99	4.08	.05
(19) 1¢-50¢	95	99	1.24	n. s.
(20) 10¢-25¢	91	93	.07	n. s.
(21) 25¢-5¢	95	99	1.24	n. s.
(22) 25¢-1¢	94	99	2.63	n. s.
(23) 10¢-5¢	23	83	61.85	.001
(24) 10¢-1¢	86	100	13.99	.001
(25) 5¢-1¢	94	99	2.63	n. s.
(26) 5¢-25¢	94	99	2.63	n. s.
(27) 1¢-25¢	95	99	1.24	n. s.
(28) 5¢-10¢	27	75	37.85	.001
(29) 1¢-10¢	86	99	10.99	.001
(30) 1¢-5¢	95	99	1.24	n. s.
EQUIVALENT VALUE TASK				
(31) Half Dollar	20	78	55.68	.001
(32) Quarter	11	81	82.39	.001
(33) Dime	48	92	42.68	.001
(34) Nickel	41	87	28.30	.001



with the nickel; the dime with the penny; the nickel with the dime; and the penny with the dime. The first grade girls were able to identify the remaining combinations of coins as often as the third grade girls.

There were significant differences between first grade girls and third grade girls in their responses to the equivalent value tasks, with the third grade girls giving a significantly higher proportion of correct responses. Percentages of correct responses from third grade girls show that they need to develop additional skills in this area. The null hypothesis was rejected since the first grade girls level of achievement was significantly lower than third grade girls level of achievement.

Hypothesis 4. There is no significant difference between third grade boys and third 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.

The data in Table V reveal that third grade boys and third grade girls are alike in their responses to the money tasks. There were no significant differences between the groups on any of the 34 items in the three tasks. Therefore, this hypothesis was accepted.

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

Item	Percentage of Correct Responses		$\chi^2$	Level of Significance
	Third Grade Boys (N = 122)	Third Grade Girls (N = 117)		
<b>COIN IDENTIFICATION TASK</b>				
(1) Half Dollar	98	97	.01	n. s.
(2) Quarter	94	88	2.17	n. s.
(3) Dime	96	97	.01	n. s.
(4) Nickel	94	92	.12	n. s.
(5) Penny	99	100	.01	n. s.
(6) Fifty cents	90	88	.10	n. s.
(7) Twenty-five cents	95	90	1.74	n. s.
(8) Ten cents	98	99	.01	n. s.
(9) Five cents	98	97	.01	n. s.
(10) One cent	100	98	.55	n. s.
<b>COMPARATIVE VALUE TASK</b>				
(11) 50¢-25¢	100	99	.01	n. s.
(12) 50¢-10¢	100	98	.55	n. s.
(13) 50¢-5¢	98	99	.46	n. s.
(14) 50¢-1¢	100	99	.01	n. s.
(15) 25¢-10¢	84	90	1.45	n. s.
(16) 25¢-50¢	100	99	.01	n. s.
(17) 10¢-50¢	100	98	.55	n. s.

TABLE V (Continued)

Item	Percentage of Correct Responses		$\chi^2$	Level of Significance
	Third Grade Boys (N = 122)	Third Grade Girls (N = 117)		
(18) 5¢-50¢	100	99	.01	n. s.
(19) 1¢-50¢	100	99	.01	n. s.
(20) 10¢-25¢	93	93	.01	n. s.
(21) 25¢-5¢	99	99	.46	n. s.
(22) 25¢-1¢	100	99	.01	n. s.
(23) 10¢-5¢	88	83	.75	n. s.
(24) 10¢-1¢	99	100	.01	n. s.
(25) 5¢-1¢	100	99	.01	n. s.
(26) 5¢-25¢	98	99	.01	n. s.
(27) 1¢-25¢	100	99	.01	n. s.
(28) 5¢-10¢	84	75	2.61	n. s.
(29) 1¢-10¢	100	99	.01	n. s.
(30) 1¢-5¢	100	99	.01	n. s.
EQUIVALENT VALUE TASK				
(31) Half Dollar	84	78	.96	n. s.
(32) Quarter	90	81	3.24	n. s.
(33) Dime	97	92	1.49	n. s.
(34) Nickel	93	87	2.02	n. s.

## CHAPTER V

### SUMMARY, IMPLICATIONS, AND RECOMMENDATIONS

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

The subjects for this study were 138 first grade children and 239 third grade children enrolled in the Stillwater Public Schools. Data were obtained during the fall semester, 1973.

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

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

#### Findings

1. Third graders were significantly more advanced than first

grade children in their ability to identify coins. The penny was the only coin that first grade children knew as well as the third grade children.

2. Third grade children were significantly more advanced than first grade children on approximately half of the comparative value tasks.

3. The third graders were significantly more advanced than the first grade children in their responses to the equivalent value task section.

4. There was no significant differences between third grade boys and third grade girls in any of their responses to the 34 items in the three tasks.

5. The percentages of correct responses of third grade children ranged from 81 percent to 95 percent. This suggests that some children of this age level need more experience in developing the skills of determining equivalent values of coins.

#### Implications

1. The same curriculum regarding money concepts can be planned for both boys and girls at the third grade level.

2. Although most third grade children were able to achieve the equivalent value tasks, 10 to 15 percent needed additional learning experiences to aid in the development of these concepts.

3. Third graders need additional experiences in the actual handling of coins, in making change, and in developing concepts of equivalent values of coins.

### Recommendations for Further Research

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

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

2. Educational materials need to be developed to provide pre-school and primary school aged children concrete experiences in the handling of money.

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## APPENDIX

SCORE SHEET

NAME

AGE

DATE

## TEST I--MONEY--SORTING TASK

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

\*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
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\*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

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