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AN ABSTRACT OF THE THESIS OF Margo I. Keller for the Master of Science
in Speech Communication: Emphasis in Speech Pathology/Audiology, pre-
sented May 6, 1975.

Title: A Comparative Study of the Responses by Varying Socioeconomic
Groups on General Knowledge and Categorization Tasks.

APPROVED BY MEMBERS OF THE THESIS COMMITTEE:

_____
Joan McMahon, Chairman

Mary Gordon

Fay Sorenson

_____
Jack Hogreaves

This study sought to determine if there are any "cultural" or
economic level patterns of behavior in responding to tasks involving
categorizing pictures and recalling general knowledge. The Daberon
School Readiness Device (1972), which contains subtests for general
knowledge and categorization, was used to assess four groups of chil-
dren: 1) lower-SES white, 2) lower-SES black, 3) middle-SES white, and

4) middle-SES black. This study involved thirty black and thirty white children between the ages of five years and five years, eleven months. All subjects were screened to determine race, age, auditory acuity, speech intelligibility, subject cooperation, and socioeconomic status (SES). Testing for intelligence was performed at the beginning of the testing situation.

The study was designed to determine whether one ethnic or SES level group would correctly identify significantly more general knowledge and/or categorization items on the Daberon than other ethnic and SES groups. Further, the study sought to determine if there were any significant patterns evident between ethnic and SES groups in the way they responded to general knowledge tasks. Finally, the study was conducted to determine whether there was any statistically significant relationship between scores earned by all subjects on the Slosson Intelligence Test for Children and Adults (1963) and those scores earned by all subjects on the Daberon School Readiness Device (1972).

Results of the study indicate white subjects answered significantly more general knowledge tasks than black subjects. Significant differences also were noted in patterns of responses to general knowledge tasks. White subjects responded significantly more often with general concept-type responses as opposed to specific concept responses than black subjects. No statistical significance was noted between ethnic and SES groups in responding to categorization tasks. Finally, statistical significance was present between Slosson Intelligence Test scores and those scores earned on the general knowledge and categorization subtests of the Daberon School Readiness Device. These results indicate a posi-

tive correlation between a child's ability to function in the area of general knowledge and categorization and his general intelligence.

It is postulated that factors which might influence Daberon general knowledge subtest scores and patterns of responses are: 1) the influence of linguistic systems within the child's home environment and 2) the subject's ability to respond by utilizing abstract thinking rather than by relying heavily on implicit meaning.

A COMPARATIVE STUDY OF THE RESPONSES BY VARYING
SOCIOECONOMIC GROUPS ON GENERAL KNOWLEDGE
AND CATEGORIZATION TASKS

by

MARGO I. KELLER

A thesis submitted in partial fulfillment of the
requirements for the degree of

MASTER OF SCIENCE IN SPEECH COMMUNICATION:
with an emphasis in
SPEECH PATHOLOGY/AUDIOLOGY

Portland State University
1975

TO THE OFFICE OF GRADUATE STUDIES AND RESEARCH:

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May 6, 1975

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I dedicate this thesis to my mother, Marjorie LaFond, who always had unbelievable faith in me!

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CHAPTER I

INTRODUCTION

Language concept development is one of the primary considerations in our educational system today. Between infancy and age five or six years, tremendous language development occurs (Biber, 1967). By the end of the child's kindergarten year, his method of learning about his world has reached an advanced and complicated stage and he will have extended his interests and knowledge into practically all realms of human experience. It is crucial, therefore, that every child should be given an equal opportunity to develop these language concept skills.

The literature suggests that a child's ability to function in the areas of general knowledge and categorization correlates positively with general intelligence. It is felt that general intelligence is reflected in the range of an individual's information and his ability to discriminate within and between categories. Part of a child's mastery of language depends upon his being helped to establish a rich and skillful use of language which will enable him to deal more efficiently within this society's verbal communication system.

Many diagnostic tests are available to assess language abilities in children; the results of these tests are generally used to design a treatment program for the individual. Welcher (1970) believed that no series of tests, however skillfully administered, reveals an innate intellectual endowment, but rather measures whatever intellectual capacity

there may be in conjunction with all the influences to which a child has been subjected. It appeared to Welcher that disadvantaged children are less often exposed to the kinds of information found on intelligence tests and are thus less able to cope with them. Therefore, test results may not be a valid basis upon which to plan treatment strategies since not all testing instruments may be appropriate for each economic level or cultural group being evaluated. Many of the tests are based on a broad, all-encompassing norm level, and it would appear necessary to establish normative level of ability on diagnostic instruments after taking into account the variables of economic level or cultural background.

As Bernstein (1970) stated, often in an educational setting the language of black children is misinterpreted as "simply poor language." Hence, a definite need exists for educators to be more aware that black language does contain a vast potential of meaning. He further stated that if the contexts of learning (i.e., the reading books and teaching materials) are not presented in contexts which act as "triggers" for the child's imagery--"if these materials are not triggers on his curiosity and explorations in his family and community," the child will not be comfortable in the educational world. Bernstein concluded that it is considered an accepted educational principle that we should work with what the child can offer and not regard him as totally uneducated. There needs to be, as Horton (1970) commented, an attempt to equalize opportunity for all citizens regardless of racial or ethnic background to achieve an education.

This researcher found no major studies which compared the responses

to general knowledge and categorization tasks of lower-socioeconomic black, lower-socioeconomic white, middle-socioeconomic black, and middle-socioeconomic white kindergarten-age children in an urban setting. A need exists to determine if a statistically significant difference or patterning of responses is present within or between these four major socioeconomic groups. It appears that this type of information could be applied to develop education programs for beginning kindergarten children.

For the purposes of this study, general knowledge and categorization are defined as follows:

1. General Knowledge: That information which may be acquired by an individual who experiences the "usual" opportunities in this society.
2. Categorization: The identification of likenesses between objects, substances, faces, or ideas (Glasser and Zimmerman, 1967).

Statement of the Problem

The present study was designed to determine if there are any "cultural" or economic level patterns of behavior in responding to tasks involving categorizing pictures and recalling general knowledge. The Daberon School Readiness Device (1972), which contains subtests for general knowledge and categorization, was used to assess four groups of children: 1) lower-socioeconomic white, 2) lower-socioeconomic black, 3) middle-socioeconomic white, and 4) middle-socioeconomic black. The Daberon has not been formally tested utilizing varying socioeconomic groups, and it was felt that for comparative purposes this type of study would be valuable. Significant response patterns identified within economic or between cultural groups should be valuable to classroom

teachers who are responsible for planning educational programs for children from varying socioeconomic status (SES) levels.

The null hypotheses tested in this investigation are:

1. No statistically significant difference exists between the total number of general information and category concepts correctly identified by: a) lower-socioeconomic white, b) lower-socioeconomic black, c) middle-socioeconomic white, and d) middle-socioeconomic black subjects.
2. No statistically significant inter-group response pattern differences exist in performing general knowledge and categorization tasks on the Daberon.
3. No statistically significant relationship exists between scores earned by all subjects on the Slosson Intelligence Test (1963) and those scores earned by all subjects on the Daberon School Readiness Device (1972).

CHAPTER II

REVIEW OF THE LITERATURE

For the purpose of this study, a review of the literature relative to cognitive language development in children will center around four major areas: 1) language and cognition development in children; 2) cultural differences in language and cognition development in children; 3) research studies regarding language and cognition development utilizing varying SES groups; and 4) educational implications of cultural language differences.

Language and Cognition Development

Theorists have postulated various hypotheses to explain how children acquire language and cognition.

Biber (1967) stated there are important stages during which a child organizes his understanding, his ideas, and the meaning of things and relationships in the world in which he lives, i.e., "objects become not only objects to do things with, but they also have names, uses, functions and come in different shapes and sizes." In other words, objects can be classified and grouped in various ways. One of the important theories Biber contends is that most children are able to function proficiently in regard to general knowledge or classification, although they may not progress through these language developmental stages in the same manner. Some stages of development, however, may be

entirely missing, and if this occurs, they need to be identified and appropriate treatment programs established.

Osser (1970) discussed biological and social factors affecting language development. He stated that Lenneberg (1964) in his book New Directions in the Study of Language proposed that language development is a function of maturational factors and that human language is a species-specific phenomenon. The child's capacity to learn language is a consequence of maturation. Lenneberg reported there is no evidence that the onset of language is related to special training or that the capacity for language acquisition is related to special training. He further stated the capacity for language acquisition is intimately related to the maturation of uniquely human anatomical and physiological characteristics.

Chomsky (1965) maintained that a child's ability to produce and understand novel sentences can be understood only by assuming he has an innate language capacity. Chomsky referred to a hypothetical set of innate mechanisms that permit the child to analyze incoming linguistic data and to produce messages. In other words, linguistic principles are not learned but rather are part of the child's innate conceptual capacities; and he acquires language by discovering its underlying system or grammatical rules. The process characterized by the language acquisition device incorporates a built-in set of specifications for correct grammars, plus a testing capability which permits the child to discover which particular grammar, out of a small set of correct grammars, is appropriate for the language to which he is exposed. Through this system the child can understand novel sentences. It can be summarized

that Chomsky's model of language acquisition provides only a passive role for environmental or social factors whereas the child is assigned a very active role in his own language development.

The environmentalists' position described by Mower (1960) can be summarized as follows: the infant begins to learn language by associating the sounds of the human voice, particularly the mother's, with need-satisfying circumstances (e.g., milk drinking). Subsequently, when he hears his own random babbling, he is more likely to repeat those sounds that are similar to the pleasurable sounds made by his mother. Mower felt that as the mother tends to reward the infant's sounds, he learns that his imitations are generally reinforced, and thus he is on his way to learning those speech patterns. Mower terms this form of language acquisition "imitation-reinforcement."

Osser (1970) noted a relationship between the two opposing biological and environmental theories. He believed a point of convergence is present between the biological and environmentalist theories, because they both agree that language is acquired in a social context and that there are individual and group differences in linguistic performance.

Hardy (1970) disagreed with Chomsky and felt because communicative skills must be learned, the environment in which learning takes place also plays an important role in determining the degree of skill ultimately achieved. Additionally he believed a close relationship exists between communication skills and basic intellectual capacity. While a child learns to talk because of the model he hears, the basic intellectual endowment is of fundamental importance in determining the degree to which his language will reflect the precision and the nuances of

meaning, which are the finer points of language.

Children's grammar reflects, according to Erwin (1964), the norm of the community in which they live. This language development theory was referred to as an "imitative view." Erwin explained that children make errors and introduce abbreviations in an effort to approximate sentences heard and develop more adult-like language with the gradual elimination of errors. Another view, which Erwin believed to be closer to the true language developmental process, was that development is described as the evolution of a series of linguistic systems increasing in complexity and these changes in behavior reflect changes in the child's syntactical rules. The base of generalizations and analogies, Erwin concluded, is formed by the child as he reflects the influence of listening to adults.

In their book School Readiness Ilg and Ames (1972) presented a summary of the normal language and cognition development of five-year-old children. Refer to Appendix A for this description.

Cultural Differences in Language and Cognition Development

Language characteristics of disadvantaged children, and more especially black children, have been widely reviewed in the literature. A predominant characteristic of the majority of disadvantaged children (black and white) is that they lack the language facility necessary for independent thinking and problem solving. For these children, language deficiencies hamper the development of concepts; therefore, specific training and language development are needed. In order that a child may receive special training to improve weak or missing language con-

cepts as soon after he enters school as possible, a process in the educational system to facilitate early identification of problem areas should be instituted (Doyle, 1972).

Many characteristics of black language have been ascribed to the doctrine of genetic inferiority of the Negro. Baratz (1969b) stated it was not until the 1954 Supreme Court decision concerning segregation in the public schools that the institutional tradition of regarding the Negro as genetically inferior was legally replaced by the idea that his behavior was pathological in the social sense, due to the history of slavery in this country. Consequently, Baratz contends that the language difficulty experienced by the economically deprived Negro child in an educational setting has been due to an underdevelopment of his language system that does not allow language to function in aiding cognitive development.

Ralph (1967) explained that cultural differences in performance on intelligence tests and in school achievement imply a perceptual-language difference in regard to culturally disadvantaged children. Further, he implied that these impairments are cumulative and the older the child becomes the greater the deficit. He proclaimed that in their responses disadvantaged children illustrate a "poverty" of vocabulary and a "paucity" of words; thus, children from lower-class families require about one year longer to reach "mature" articulations than their middle-class peers. The disadvantaged child's grammar and syntax were also identified as additional depressed areas of development.

According to Bereiter and Engelmann (1966), children three to five years old from lower-SES backgrounds are shown to be retarded or

below average in every intellectual ability; consequently, they are functioning at least one year or more behind children of the same age from higher-SES backgrounds. These authors described the verbal learning of the culturally deprived as the outstanding lacking characteristic and indicated that cognitive uses of language are severely restricted, especially in communication between adults and children in lower-SES homes.

Baratz (1969a) disagreed with Bereiter and Engelmann and found that when lower-SES and middle-SES black children were provided equivalent tasks, their ability to repeat a sentence accurately largely depended on whether it was presented in the child's primary dialect (black or Standard English). Consequently, she discovered that white middle-SES children were as handicapped in repeating black dialect sentences as were black lower-SES children in repeating standard English sentences. In summary, within both groups the mistakes were systematic intrusions between the primary dialect and the less familiar.

By virtue of class relationship or common occupational function and social status, social groups tend to develop strong communal bonds (Bernstein, 1970). He stated:

If the working relationship of a group offers little variety, little exercise in decision making; if successful assertion must be a collective rather than individual act; if the work task requires physical manipulation rather than symbolic control; if the home is over-crowded and limits the variety of situations it can offer; if the children socialize each other in the environment, offering little intellectual stimulation; if all these attributes are found in one setting, then it is plausible to assume that such a social setting could generate a particular form of communication which would shape the intellectual, social and affective orientation of the child.

He presented two general types of linguistic codes (restricted and elaborate) which can be developed within a society. A restricted code is more socially than conceptually oriented, requires its users to share a range of implicit meanings, and appears limited and stereotyped in its expressive alternatives. An elaborate code is conceptually oriented, does not rely heavily upon implicit meanings, and is potentially rich in the alternatives for expression. Speakers limited to a restricted code may have difficulty switching from this form of communication to other forms. He found that in the middle-class population one tends to find people functioning within both the elaborate and restricted code systems; yet within the lower-SES or working population a higher proportion of families seems to be limited to a restricted code. Bernstein (1961) contends a child's language is maintained primarily through the process of developing linguistic relations before the child reaches the classroom and before the formal demands of the social structure are made upon him. Luria (1960) further stated that speech does not merely indicate correspondence in the environment but that it isolates, abstracts, and generalizes perceived signals and relates them to certain categories. This type of language orientation is guided and regulated by a speech model that continuously makes available to the child a linguistic structure that facilitates this shift from substance to response. Luria was referring to an elaborate linguistic code system which is generally established within a middle-SES population. The lower-SES family structure is less formally organized in relation to the language and cognitive development of the child; and according to Bernstein (1961), this type of environment limits the per-

ception of the developing child. It appears that in time the child learns to respond to, and makes responses to, stimuli that are immediately relevant and that the child's ability to deal with abstractions is adversely affected.

Williams and Naremore (1969) agreed with Bernstein's (1961) theory that social structures place characteristic demands upon their members for particular modes of language behavior. These modes of language regulate the cognitive and social development of children and thus serve to perpetuate the parent social structure. Their research examined the elaboration of responses by children from lower- and middle-SES levels. There were three types of possible response modes: 1) simple: negative or affirmative; 2) naming: object, person, place, etc.; and 3) elaboration: an explanation, description, or some type of story-telling. They found social-class differences were greatest in response elaboration when questions could be answered adequately by a simple "yes" or "no" or naming. Lower-SES children tended more to supply the minimally acceptable response whereas the higher-SES counterparts had a greater tendency to elaborate their remarks. For example, when asked to name their favorite TV show, the lower-SES group supplied only the name of the show; the higher-SES group gave the name and, in addition, went on to tell about the show, what happened, who was in the show, etc. When the questions required elaboration, however, the socioeconomic differences all but disappeared. In other words, when the subjects were specifically asked to tell about or describe a particular incident or subject, all groups presented elaborate responses.

In addition, Williams and Naremore (1969b) noted that lower-SES

children tended to talk in the first person using a type of "self-focused" mode of discourse or, in general, to employ a particularistic and concrete style of speaking. When responding to a particular subject, they would consistently use remarks such as "I like," "I saw," "I do," etc. By contrast higher-SES children tended more to employ a variety of grammatical perspectives in their remarks and employed a greater use of third person, subject-noun phrases, reflecting a more general and abstract perspective in their expressive language. For example, when asked how to play "hide and go seek," one subject replied:

Well, one person hides his eyes so that he can't see anything and all the other people go out and he counts to a certain, he counts so many, up to a hundred or so then he says, "Ready or not here I come," then he runs out and he looks for 'em. . . .

Williams and Naremore concluded that the speech of the lower-SES children generally reflected a more context centered or "bound" style of speech as compared with a more topic centered speech of their higher-SES counterparts. This is consistent with Bernstein's (1961) thesis of social class differences and modes of speech.

According to Bailey (1968), children's system of language that is native to their environment is well established between the fifth and seventh years of life. He noted that there are many speakers of non-Standard English whose basic patterns resemble those of Standard English, with primarily an English vocabulary and similar phonology. One phonological difference recognized by Bailey was the terminal fading which resulted from relaxation of the muscles during articulation of the ends of words so that the final syllable of a word was weakened or lost completely. There is a question, however, whether this fading is

due to the relaxation of articulators or represents another grammatical system such as Creole. There is currently no evidence to support the theory the black language is a definite form of the Creole language, although they appear to be similar in many ways.

According to Povich and Baratz (1967), language development of disadvantaged children does not represent a retardation of acquisition of language, but rather the children are learning forms that do not appear in Standard English. Their research indicated children use forms that are on the highest level of development according to Lee's Developmental Sentence Scale (1966). This seems to illustrate that disadvantaged children have a fully developed, but nonstandard, language system. Entwisle (1970) felt black children internalize a different linguistic code as a consequence of the cultural forces impinging upon them. At the same time, because their subculture is an enclave with the white society, they are forced to internalize a second code, Standard English. If Baratz and Entwisle are correct, it appears to indicate that black children become proficient in both codes and, therefore, are linguistically advanced as compared to white middle-class children.

J. M. B. Hardy (1970) asserted an opposing view in which he defined the disadvantaged child as a product of genes and environment and that both factors are involved in his status and needs. The main theory he proposed was that regardless of genetic background the disadvantaged child has had few advantages to enhance his social development and learning potential in school; thus, his ability to communicate during his early years suffers severely. Further, according to Hardy the disadvantaged child may never develop the momentum to overcome these early

communicatively negative experiences and, consequently, it is most important to obtain early identification of problems and to follow up with educational programming.

Correlation Between SES and Language Development

The following is a review of various research studies on language and cognition development conducted, utilizing varying socioeconomic groups.

Jones and McMillan (1973) examined social class differences in speech produced by five-year-old children under three conditions ranging from highly structured to a more natural linguistic setting. Results indicated that generally middle-class children were more fluent and produced more grammatically complex sentences than lower-class children. The two groups produced equal numbers of communication units; however, the middle-class subjects produced significantly longer communication units. The two groups differed only slightly in their use of pronouns except under the least structured conditions. The lower-class subjects produced significantly more pronouns under this condition, which tends to support Bernstein's (1961) theory regarding the restricted code of lower-class children conveying particularistic context-bound meanings. Using the Illinois Test of Psycholinguistic Abilities (ITPA) (1968), Stephenson and Gay (1972) examined the psycholinguistic abilities of black and white children between the ages of five and six from varying socioeconomic levels; and investigated the possibility of lower-SES children being visual-motor oriented and middle-SES children auditory-vocal oriented. Results revealed that socioeconomic status is signifi-

cantly related to psycholinguistic abilities. The level of performance and the pattern of psycholinguistic abilities of black children were relatively free from semantic influence of SES; however, the performance of white children appeared to be related to socioeconomic status. The black and white lower-SES groups produced the most variability between the ITPA subtests, performing lower on the verbal tasks with the black children showing the lowest performance. Performance on the verbal tasks was significantly below all other subtests for both groups of children. All groups showed a significant weakness on verbal expression tasks. Manual Expression subtest scores surpassed Verbal Expression scores at all levels. Further, Visual Motor Association scores surpassed Auditory Vocal Association scores for black and white lower-SES groups. The performance of black lower-SES children revealed difficulties with the automatic language patterns measured on the ITPA. Performance on the Auditory Sequential Memory subtest was high for all black children with the level of performance unaffected by SES. This study did not confirm the theory that the lower-SES levels are primarily visual-motor oriented and the middle-SES levels auditory-vocal oriented.

Wolfram (1971) illustrated some similar and dissimilar features of southern white and black speech. He noted the -Z third person (he does, he goes, etc.) was not an inherent part of the black linguistic system; and its infrequent occurrence can be attributed to "dialect importation," a language contact phenomenon in which non-indigenous forms are borrowed from another dialect without its systematic incorporation in the target dialect.

Stevenson et al. (1971) asked the question whether the correlations among various measures of learning and performance differed according to the background of the children tested. They tested four- and five-year-old children from varying socioeconomic levels and found that generally the disadvantaged child had more difficulty than the advantaged child in understanding the questions and needed more preliminary instructions. Jeruchimowicz et al. (1971) investigated qualitative and quantitative differences in preschool children from varying socioeconomic levels. Results indicated there were significant differences in the receptive portion of the test between the proportion of errors on action words (verbs) and object or noun words made by the lower-SES children. Expressive verb errors were higher than noun errors for the lower-SES groups. Turner and Pickvance (1971) sampled 160 five-year-olds from differing SES levels on their ability to express uncertainty. Social class proved to be the more important factor in regard to those children who asked indirect questions, as significantly more middle-class children asked indirect questions. It was concluded that the socialization procedures of the middle-class families were likely to encourage a child to perceive reality in terms of a range of possible questions.

Two different studies were conducted by Gerber and Hertel (1969) and Howard et al. (1970), using the ITPA to assess language abilities of four-, five-, and six-year-old children from differing SES levels. Their results indicated the culturally disadvantaged had significantly lower language ages than their nondisadvantaged peers. Howard et al. felt the way symbols are perceived, as well as combined into meaningful

spontaneous discourse, depends upon experience and practice with language. In their study of four-year-olds from varying SES levels, Sitkei and Meyers (1969) found that the middle-class black and white groups, as compared to lower-class black and white children, excelled only in verbal comprehension and not in visual-motor tasks. It was thought that white children would excel over black children at the lower-SES levels and this showed to be significant only in visual discrimination tasks. Difference in race and class was limited to the functions that required the use of Standard English, and not in expressive language from their memory.

Entwisle (1968) conducted a study involving kindergarten, first-, third-, and fifth-grade children from lower- and middle-SES levels. Her sample included both black and white children. The subjects were presented ninety-six stimulus words representing several form classes (nouns, adjectives, verbs, and pronouns). Entwisle felt that free association to word stimulus was an efficient way of studying language development in young children because these associations are closely related to general linguistic competence and to verbal comprehension. Generally speaking, the results indicated the kindergarten and first-grade lower-class children were equal to or superior to the kindergarten and first-grade middle-class children. The fifth-grade middle-class children, however, significantly surpassed the fifth-grade lower-class children. The results tend to suggest that as lower-socioeconomic children progress through school, their linguistic abilities decrease.

Hertzog et al. (1968) conducted a study involving Puerto Rican children and concluded that apparently due to non-directed verbalizations

in the home the children had greater trouble in school when faced with a system that made specific demands upon them. They found that although there was at least as much conversation and verbal exchange in the Puerto Rican homes as in the middle-class homes, the use of language appeared to differ in at least two respects: 1) middle-class families gave instructions that were task directed and Puerto Rican verbalizations tended to be social and affective; and 2) middle-class mothers tended to make sure task-directed instructions were understood and carried out while Puerto Rican mothers had a tendency not to insist that instructions or directions were acted upon. In an educational setting, the Puerto Rican children more frequently used passive unresponsiveness as a form of nonverbal response than the middle-class children.

According to Scholnick et al. (1968), social class position affects discrimination learning, although it does not affect concept learning. Further, they noted lower-class children had less difficulty with complex tasks, which is contradictory to previously cited studies. Shriner and Miner (1968) noted that in their study using nonsense words there was no difference between culturally advantaged and disadvantaged children in their ability to deal with receptive nouns, expressive nouns, verb forms, or possessives--a finding which also contradicts previously cited studies. LaCivita et al. (1966) and Deutsch (1965) found that as higher-SES children progress through school, they tend to become increasingly sophisticated in using grammatical cues to discern word meanings. Deutsch conducted a four-year study of children from various racial and social class groupings; and his research results, which agreed with Entwistle (1968), indicated that black and white

lower-class children are subject to a "cumulative deficit phenomenon" as compared with middle-class children. This cumulative deficit takes place between the first- and fifth-grade years. He believed there needs to be effective remedial and enrichment programs which follow developmental stages, and that curriculum changes should be initiated early in a child's school experience.

Many variables are associated with setting and procedures in any type of language study, as noted by Dickie and Bager (1972), and need to be seriously considered by the reader. One very important variable is language familiarity since the language spoken in a classroom or testing situation may be quite different from what is spoken in the child's normal environment. It is, therefore, best to have an informal testing situation, thereby encouraging a more accurate language sample.

Educational Implications

The apparent lack of academic success within various cultural groups, especially lower-class blacks, whites, Chicanos, and Indians, is a major educational issue (Anastasiow, 1972). W. G. Hardy (1970) further noted that a high incidence of language, speech, and reading problems is known to exist among culturally disadvantaged children. He attributed these significant problems to the child's environment since it frequently fails to provide stimulation and language growth and adequate (by middle-class standards) models or patterns to develop acceptable and competitive speech habits. This is in agreement with J. M. B. Hardy (1970), who stated disadvantaged children suffer from a deprived environment which does not allow for the active physical interaction

necessary for a full development of a child's intellectual functioning.

It was demonstrated by Baratz and Shuy (1969) that black disadvantaged children's language, while different in surface characteristics, contains the necessary linguistic structures to express abstract reasoning. Anastasiow (1970) related that when black disadvantaged children are asked to repeat a sentence, they tend to alter it to conform to the regularities of their own dialect. This type of response suggests the disadvantaged child has a different, as opposed to deviant language system, which agrees with Baratz and Shuy (1969). Anastasiow (1970) further suggested that all children are active processors of information; therefore, learning can only occur when children are allowed to utilize the talents they possess in the manner that allows them to acquire more advanced skills and modes of thought.

The chances of the disadvantaged child becoming a fully functioning member in the mainstream of American society, according to Osborn (1967), appear to depend upon his ability to succeed in school. Further, he believed the "time schedule" or curriculum progression of the public schools has been established by the progress of middle-class children and, consequently, has presented a very serious problem for the disadvantaged child. Preschools and kindergartens designed specifically for the disadvantaged child can contribute greatly by providing the skills he will need to meet this established time schedule.

Baughman and Dahlstrom (1968) saw the need to reduce the black-white gap and asserted that educational programs should not be limited to black children, but rather should involve all groups. To meet this need there should be comprehensive school programs providing concrete

incentive curriculums that instill in the child a desire to learn.

Osborn (1967) strongly supported the need to find the most effective means of preparing disadvantaged children academically, as well as emotionally and socially, for the demands of the public school system.

Williams (1970) stated there is a strong correlation between economic opportunity and ability to function in the mainstream of society and he equated this with the ability to use the language of the society effectively. He felt that the antipoverty preschool programs helped to ease disadvantaged children into a new social structure without the fear of losing their well established parental structure. Entwisle (1968) also was concerned with the need for equal educational opportunity and proposed that those who believed the schools would play a large role in overcoming the culture of poverty have great cause for concern. She felt the school failed to play this role, since if an individual failed to become sufficiently literate, all other parts of the educational process become adversely affected and the child either is rejected from or elects not to remain in the educational process. Basically, she viewed the problem as less and less success leading to less and less expectation of a child's success in school. It, therefore, becomes extremely important to identify areas of excellence or areas of relative achievement in disadvantaged children, for it seems obvious that if a child is to imagine himself as succeeding in an educational system, he will require successful experiences within the first two or three years of school (Entwisle, 1970).

The classroom language problems of lower-class children, as viewed by Cazden (1970), have two possible explanations: 1) they have acquired less language than the middle-class child or 2) they have acquired a

different language. The "different-language" theory is strongly supported and has been explained in the preceding review of the literature by Williams and Naremore (1969b) and Baratz (1969b). Cazden (1970) contends that within the educational framework there needs to be more than a description of a child's grammatical competence, and primary emphasis should focus on communication competence, i.e., "how the child perceives and categorizes social and educational situations of his world and differentiates his ways of speaking accordingly."

Bernstein (1970) agreed with Osborn (1967) that much of our school context is drawn from aspects of the symbolic world of the middle-class, and when a disadvantaged child steps into school he very likely is stepping into a symbol system which has no link to his life outside the classroom. This link with his total environment needs to be present for a successful learning situation. Horton (1970) viewed success in school as the ability of a child to listen effectively, to receive, process, store, and retrieve information. He felt the needs of the culturally disadvantaged are really not the same as the middle-class child and this must be reflected in the educational system. Horton further believed, as do many of the researchers cited, early intervention is extremely critical during the preschool and kindergarten years, and focus should emphasize perceptual and language development. Minuchin and Biber (1968) suggested that success means developing emotional strength along with specific skills. The teacher needs to accept relatively poorly articulated expressions without negative evaluation initially which may produce a positive atmosphere for the child, thereby enhancing his intellectual development. Sigel (1964) consequently

stated, "Excessive demands for verbalizations may bring about a withdrawal or rebellion from other aspects of learning." In view of this, educators must be sensitive to the needs of their students.

In summary, Entwisle (1970) highlighted the importance of speech and language in our society.

If a child's speech and language identifies him as a member of an outgroup, when tagged as a member of that group he may be endowed with all the other modal attributes of that group--relatively low economic status, low educational status, values that emphasize immediate rather than delayed gratification, relatively low power in the social hierarchy, or even having certain potential learnings below the middle-class potentials.

It would appear that education is the important intervening factor between success or failure in our society, and unless there is early identification of educational needs, which many of the previously cited researchers have stressed, appropriate curriculum programs cannot be planned for the disadvantaged child. If this occurs, it is very likely that the disadvantaged child will be unable to remain in the mainstream of our American society and be forced to exist with less than an equal opportunity.

CHAPTER III

METHODS AND PROCEDURES

The present study involved thirty black and thirty white children with normal speech and language. All subjects were screened to determine their race, age, auditory acuity, speech intelligibility, subject cooperation, and socioeconomic status (SES). Testing for intelligence was performed at the beginning of the testing situation.

Subjects

Thirty white and thirty black children with normal speech were selected from three Portland Public Schools. Following the initial screening, fifteen lower-socioeconomic white, fifteen lower-socioeconomic black, fifteen middle-socioeconomic white, and fifteen middle-socioeconomic black children were selected for this study, using a random sampling table from a subject pool of 120. Participating in this study were fifteen female and fifteen male black subjects and fourteen female and sixteen male white subjects.

Variables

Variables controlled were age, race, auditory acuity, speech intelligibility, subject cooperation, and socioeconomic status. Sex was not a variable as the sample of children available was limited; the number of children in each group possibly would have been reduced had

this variable been included.

Age

The ages of the children tested ranged from 5-0 to 5-11 with a mean of 5-6. The age of each child was determined by subtracting his birthdate from the date he was tested.

Race

Thirty black children and thirty white children were included in this study. To determine the race of black children for this study the criterion used was that established by Portland Public Schools: if a child had two black parents or one black parent and the other of a different race, the child is considered black.

Auditory Acuity

Each subject chosen to participate in this study received an informal hearing screening which consisted of asking the subject, who was placed across the room (approximately eight feet) with his back to the examiner, to repeat the following four sentences: "Put your hand up." "Tell me your name." "Clap your hands." "Sit down in the chair." The examiner used less intensity than a normal speaking voice. Normal hearing was further determined by consulting with the classroom teacher and/or speech clinician. Any child who was identified by the teacher to have a suspected hearing loss, difficulty following directions in class, or whose parents had reported a hearing loss was not included as a potential subject.

Speech Intelligibility

Each subject was required to have 100 percent speech intelligibility as determined by consulting the classroom teacher, school records, speech clinician when available, and the judgment of this investigator.

Subject Cooperation

The ability of each child to remain under stimulus control was determined by consulting with the classroom teacher and observation by this investigator. The subject's cooperative behavior was noted during administration of the Slosson Intelligence Test (1965), which was given prior to the selected items from the Daberon School Readiness Device (1972). Subjects were required to remain under stimulus control for duration of the test in order to be considered potential subjects for this study.

Socioeconomic Status (SES)

The determination of socioeconomic status was made on the basis of the U.S. Bureau of the Census Working Paper Number 15, Methodology and Scoring of Socioeconomic Status. The operating procedure used in this study was to assign a number determined by the occupation of the chief income recipient in the child's family. The numerical values ranging from 01 to 40 were considered lower socioeconomic status and those from 50 to 83, middle socioeconomic status. After consultation with the school principals, children on the free lunch program also were considered lower socioeconomic status.

The occupation of the chief income recipient in the child's family

was obtained by first checking school records on each child which listed the parents' occupation and/or employers. If only the employer was listed and not the occupation, the child and/or a staff member familiar with the parents and occupation were consulted. Where both parents were employed, the occupation used was that of the chief income recipient. If neither parent was employed, the numerical value of 0 was assigned the subject.

Intelligence

The Slosson Intelligence Test for Children and Adults (1963) was used to survey the intelligence of the subjects. Children were not excluded from this study based on an intelligence rating; however, the intelligence rating was used for comparative purposes in data analysis.

Instrumentation

Instruments

The Daberon School Readiness Device (1972) was designed as a screening and teaching instrument. A high percentage of accurate responses on the Daberon indicates school readiness. This tool does not test a child to his limits; it is designed to be a simple means of predicting readiness for school activities. Information gained from this test may be used to identify future problem areas, the need for further diagnostic and prognostic study, information that needs to be taught in the classroom, and needed medical and/or psychological evaluation. The information obtained from this evaluation may be utilized to establish a baseline for a continuing record of educational progress.

The Daberon subtests surveying General Knowledge and Categorization were administered to each subject. There were a total of thirty General Knowledge and six Categorization questions administered to each subject. See Appendix B for a complete listing of the specific subtest questions.

The Slosson Intelligence Test (SIT) (1965) was designed as a short individual screening instrument and consists of a number of questions arranged in appropriate chronological order of difficulty. Testing begins with the stimulus item one year below the subject's chronological age and is discontinued when a basal and ceiling have been established. The test yields a raw score, which can be converted into two types of derived scores: 1) Mental Ability and 2) Intelligence Quotient.

Test Administration

During the first three months of the school year 1974-75, the Slosson Intelligence Test (SIT) (1963) and portions of the Daberon (1972) were administered to each subject. The examiner and child sat at a table in a well-lighted, quiet room. The SIT was administered first to each child. Selected general knowledge and categorization items from the Daberon were then administered with the examiner reading the test stimuli as they appeared in the test manual and marking the appropriate boxes on the score sheet according to the following code: R-correct; W-incorrect; N-no response; I-inappropriate response. According to the testing manual, an inappropriate response is one which is neither correct nor incorrect, is an echo of the question, or is not relevant to the subject. Echoing behavior, as defined by the manual, is repeating the last word or phrase spoken by the examiner. In order

to obtain an accurate assessment of a child's knowledge, questions were asked more than once if the examiner thought the child was confused or inattentive. The total administration time for the two tests required approximately twenty minutes.

Data Analysis

Data were analyzed in terms of means, standard deviations, t-tests, chi squares, Fisher's Exact Test, and analysis of variance, to determine if there were any particular patterns of intra- or inter-group responses on general knowledge and categorization tasks.

Item analysis was accomplished by categorizing the responses as correct or incorrect.

Chi square analyses were used to determine whether any group missed individual test items significantly more often than other groups.

Responses to general knowledge items 12 to 30 were divided into general and specific answers and chi square analysis was used to determine whether any group emitted significantly more general or specific concept-responses than other groups.

In order to determine a correlation between the subjects' intelligence scores and their Daberon general knowledge and categorization scores a Pearson's Product-Moment Correlation was calculated.

The level of significance chosen for rejection or acceptance of the null hypothesis was determined at the .05 level of confidence.

CHAPTER IV

RESULTS AND DISCUSSION

Results

The present study sought to determine if there were any "cultural" or economic level patterns of behavior in responding to tasks involving categorizing pictures and recalling general knowledge. Subtests for general knowledge and categorization in the Daberon School Readiness Device (1972) were used to assess four major groups of children: 1) lower-socioeconomic (SES) white; 2) lower-socioeconomic (SES) black; 3) middle-socioeconomic (SES) white; and 4) middle-socioeconomic (SES) black children. There were a total of thirty general knowledge and six categorization tasks on the respective Daberon subtests. Refer to Appendix B for a complete description of these questions.

The null hypotheses tested were:

1. No statistically significant difference exists between the total number of concepts correctly identified by: a) lower-SES white, b) lower-SES black, c) middle-SES white, and d) middle-SES black subjects. Results of chi square analysis, and analysis of variance (Table I) showed lower- and middle-SES white subjects responded correctly more often than lower- and middle-SES black subjects on combined general knowledge and categorization tasks. This was significant at the .05 level; therefore, the null hypothesis was rejected.

2. No statistically significant response pattern differences exist between SES groups in performing general knowledge tasks on the Daberon. Results of chi square analysis showed lower- and middle-SES white subjects expressed general knowledge tasks, utilizing general rather than specific concept responses more often than lower- and middle-SES black subjects. This was significant at the .05 level; therefore, the null hypothesis was rejected.

TABLE I
ANALYSIS OF VARIANCE RESULTS FOR GENERAL KNOWLEDGE
AND CATEGORIZATION TOTAL SCORES (N = 60)

Source of Variance	df	Sum of Squares	Mean Squares	F Ratio
Race	1	112.07	112.07	6.67*
SES	1	.00	.00	.00
Interaction	1	1.07	1.07	.06
Within	56	940.26	16.79	
Total	59	1053.40		

*Significant at the .05 level.

3. No statistically significant relationship exists between scores earned by all subjects on the Slosson Intelligence Test for Children and Adults (1963) and those scores earned by all subjects on the selected items from the Daberon School Readiness Device (1972). Results of the Pearson's Product-Moment Correlation statistical test showed a moderately high correlation was evidenced with a correlation coefficient

of .573. This was significant at the .01 level; therefore, the null hypothesis was rejected.

The Daberon subtests were administered to fifteen lower-SES white, fifteen lower-SES black, fifteen middle-SES white, and fifteen middle-SES black children, ranging in age from five years to five years, eleven months, with a mean age of five years, five months. Refer to Table II. The subject's socioeconomic status (SES) was determined on the basis of the U.S. Bureau of the Census Working Paper Number 15, Methodology and Scoring of Socioeconomic Status (1963).

TABLE II
MEAN AGE OF EACH SOCIOECONOMIC
GROUP INCLUDED IN STUDY

Socioeconomic Group	Mean Chronological Age
Lower-SES black	5.6
Lower-SES white	5.4
Middle-SES black	5.5
Middle-SES white	5.4

General Knowledge

In order to determine if there were significant differences between SES groups on total number of Daberon general knowledge tasks correctly answered, the mean and standard deviation (S.D.) were calculated. Refer to Table III for the total number of general knowledge tasks correctly identified within each SES group. The mean general knowledge

TABLE III

GENERAL KNOWLEDGE SCORES* ACHIEVED BY THE FOUR MAJOR SOCIOECONOMIC GROUPS
INCLUDING MEAN AND S.D.

SES Group	Subjects and Correct Responses															$\bar{x}$	S.D.
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15		
Lower-SES white	26	30	29	27	29	23	26	27	30	29	28	28	30	30	22	27.60	2.42
Lower-SES black	29	27	28	21	29	30	27	14	26	27	15	21	25	27	24	24.40	4.74
Middle-SES white	29	26	29	30	29	26	30	29	30	28	21	27	29	25	30	27.87	2.42
Middle-SES black	29	26	27	23	26	14	25	24	30	20	24	22	25	30	28	24.95	5.04

*Total score possible: 30.

scores ranged from 27.86 for middle-SES white subjects to 24.40 for lower-SES black subjects. To determine if the differences in means were statistically significant, t-tests were performed on the four SES groups. The values of the t appear in Table IV and indicate no statistical significance between lower-black vs. middle-black SES groups, middle-white vs. lower-white SES groups, and middle-black vs. lower-white SES groups. Three groups, however, revealed a significant differ-

TABLE IV
VALUES OF t RELATIVE TO GENERAL KNOWLEDGE SCORES FOR
COMPARISON WITH RACE AND SOCIOECONOMIC STATUS

Socioeconomic Group	Mean	S.D.	<u>t</u>	df
Middle-SES white vs. Lower-SES white	27.87 26.60	2.42 2.42	0.31	28
Lower-SES black vs. Middle-SES black	24.40 24.93	4.74 5.19	0.30	28
Middle-SES black vs. Middle-SES white	24.93 27.60	5.19 2.42	1.75	28
Lower-SES black vs. Middle-SES white	24.40 27.87	4.74 2.42	2.53*	28
Middle-SES black vs. Lower-SES white	24.93 27.87	5.19 2.42	2.04*	28
Lower-SES black vs. Lower-SES white	24.40 27.60	4.74 2.42	2.34*	28

*Significant at the .05 level.

ence at the .05 level of significance on a two-tailed test: lower-black vs. middle-white SES, t -value of 2.53; middle-black vs. middle-white SES, t -value of 2.04; and lower-black vs. lower-white SES, t -value of 2.34. These results indicate that lower- and middle-SES white subjects answered correctly significantly more general knowledge tasks than lower- and middle-SES black subjects. Table V summarizes the total number of correct responses by each SES group with an N of 15 on the thirty general knowledge and six categorization subtest tasks of the Daberon.

Individual Subtest Items. An analysis of individual general knowledge tasks on the Daberon was conducted by using the chi square analysis, and indicated a statistical significant difference at the .05 level between ethnic and SES group responses. See Table V. The items identified incorrectly more often by black-SES subjects than white-SES subjects were 6, 7, 8, and 26. In comparing lower- and middle-SES black and white subjects, a significantly greater proportion of lower- and middle-SES white subjects answered item 7 correctly. See Table VI. Although items 6, 8, and 26 did not show a statistical significant difference between ethnic and SES groups at the .05 level, they were significant at the .10 level of confidence. Refer to Table VI for a summary of the chi square analysis on items 6, 7, 8, and 26.

Patterns of Response. The final area evaluated on general knowledge tasks was patterns of response for items 12 through 30. Each item was examined by using chi square analysis to determine any evident patterns of responses. The data collected on general knowledge concepts evidenced a separation between general and specific answers in regard

TABLE V

NUMBER OF SUBJECTS IN ALL SES GROUPS RESPONDING CORRECTLY TO
GENERAL KNOWLEDGE AND CATEGORIZATION TASKS ON THE DABERON

Test Item	Lower-White SES	Lower-Black SES	Middle-White SES	Middle-Black SES
<u>G.K. Tasks</u>				
1	15	15	15	15
2	15	15	15	15
3	14	14	14	15
4	15	14	14	13
5	14	11	14	12
6	13	8	12	11
7*	11	3	10	2
8	10	5	9	4
9	15	15	15	14
10	15	14	14	11
11	15	15	15	15
12	15	13	14	15
13	13	12	15	12
14	15	15	15	13
15	15	14	15	14
16	14	14	14	15
17	15	14	14	15
18	15	15	15	15
19	15	13	15	13
20	15	15	15	15
21	15	15	15	15
22	15	15	15	15
23	15	14	14	15
24	13	14	15	14
25	15	10	15	12
26	8	8	12	7
27	15	13	15	14
28	11	11	11	8
29	12	12	13	13
30	9	10	10	11
<u>Categoriza- tion Tasks</u>				
1	15	14	15	15
2	15	14	14	15
3	15	14	14	15
4	15	14	13	15
5	14	14	15	14
6	14	13	12	15

*Significant at the .05 level.

TABLE VI

GENERAL KNOWLEDGE QUESTIONS SHOWING A DIFFERENCE BETWEEN RACIAL AND SES GROUPS TESTED

Socioeconomic Group	G.K. Question Number	Chi Square (1df)	Socioeconomic Group	G.K. Question Number	Chi Square (1df)
Lower-SES white vs. Lower-SES black	6	2.40	Lower-SES vs. Middle-SES	7	.28
Lower-SES white vs. Lower-SES black	7	8.58**	Lower-SES white vs. Lower-SES black	8	3.32
Middle-SES white vs. Middle-SES black	7	8.90**	Middle-SES white vs. Middle-SES black	8	3.40
Middle-SES white vs. Lower-SES black	7	6.64**	Middle-SES white vs. Middle-SES black	26	3.60
Lower-SES white vs. Middle-SES black	7	3.85*	Middle-SES white vs. Lower-SES black	26	2.40
Blacks vs. whites	7	17.36***			

*Significant at the .05 level.

**Significant at the .01 level.

***Significant at the .001 level.

to the total concept. For a summary of this information refer to Table VII. General concept answers were considered to be conceptually oriented and expressed the overall meaning of the concepts presented in the general knowledge items. Specific concept answers relied heavily on explicit meanings and did not express the overall meaning of the concept. Refer to Appendix C for examples of general and specific responses.

An analysis of general and specific concept responses of the total population on all general knowledge questions revealed lower- and middle-SES black subjects used specific responses significantly more often than lower- and middle-SES white subjects. See Table VIII. In comparing lower- with middle-SES black subjects and lower- with middle-SES white subjects on their general and specific responses on general knowledge tasks, by using the chi square analysis and Fisher's Exact Test, it was found that four items tended to discriminate between the four SES groups: items 16, 18, 22, and 23. When lower- and middle-SES black and lower- and middle-SES white subjects were compared on item 16, a significantly greater proportion of the white subjects answered this item with general concept responses. See Table IX. Results for item 18 (Table X) indicate the middle-SES white subjects answered this item, using general concept responses, significantly more often at the .05 level than middle-SES black subjects. The lower-SES white subjects and lower-SES black subjects did not show a significant difference on this item and indicated a tendency to answer with approximately the same number of general and specific responses. When total black and white populations were compared on item 22, the white subjects omitted more

TABLE VII

TOTAL NUMBER OF CORRECT GENERAL vs. SPECIFIC CONCEPT RESPONSES
ON GENERAL KNOWLEDGE TASKS BY ALL RACIAL AND SES GROUPS

G.K. Question Number	Lower-SES White Gen./Spec.		Lower-SES Black Gen./Spec.		Middle-SES White Gen./Spec.		Middle-SES Black Gen./Spec.	
12	13	4	12	4	14	1	15	3
13	9	6	10	4	12	4	9	7
14	14	1	16	0	15	0	13	4
15	13	4	10	17	14	2	9	7
16	9	7	5	9	12	3	4	11
17	14	3	12	3	13	4	13	5
18	12	3	11	4	14	1	9	6
19	9	6	4	9	13	2	8	5
20	14	2	12	4	15	3	15	0
21	15	0	13	2	15	1	13	3
22	3	10	0	16	5	9	0	15
23	9	7	8	7	12	2	6	10
24	14	1	11	6	12	5	9	7
25	15	0	12	3	15	0	11	2
26	2	9	0	12	3	11	0	12
27	15	0	14	4	15	0	14	1
28	9	5	7	8	7	6	5	8
29	8	6	11	5	7	10	8	6
30	7	7	5	6	4	10	6	8

TABLE VIII

RESULTS OF TOTAL POPULATION ON ALL GENERAL KNOWLEDGE
QUESTIONS WHICH REQUIRE GENERAL OR SPECIFIC
CONCEPT RESPONSES

Socioeconomic Group	General Response	Specific Response	Chi Square
Lower-SES black vs. Lower-SES white	173 203	113 81	7.67**
Middle-SES white vs. Middle-SES black	217 167	74 120	17.40***
Lower-SES white vs. Middle-SES white	203 217	81 74	1.533
Lower-SES black vs. Middle-SES black	173 167	113 120	0.165

**Significant at the .01 level.

***Significant at the .001 level.

TABLE 1X
 QUESTION 16, "WHAT DOES A DENTIST DO?"
 GENERAL AND SPECIFIC CONCEPT
 EXPRESSION

Socioeconomic Group	General	Specific	Chi Square (1df)
Middle-SES black vs. Middle-SES white	4 12	11 3	8.53**
Lower-SES black vs. Middle-SES white	5 12	9 3	6.15**
Middle-SES black vs. Lower-SES white	4 8	11 7	3.86*
Lower-SES black vs. Lower-SES white	5 8	9 7	0.92
Middle-SES white vs. Lower-SES white	12 8	3 7	2.40
Lower-SES black vs. Middle-SES black	5 4	9 11	.28

*Significant at the .05 level.

**Significant at the .01 level.

TABLE X

QUESTION 18, "WHAT DO YOU DO WHEN YOU ARE HUNGRY?"
GENERAL AND SPECIFIC CONCEPT EXPRESSION

Socioeconomic Group	General	Specific	Fisher's Exact	Chi Square (1df)
Middle-SES black vs. Middle-SES white	9 14	6 1	0.040*	
Lower-SES black vs. Middle-SES white	11 14	4 1	0.165	
Middle-SES black vs. Lower-SES white	9 12	6 3		1.4
Lower-SES black vs. Lower-SES white	11 12	4 3		.19
Lower-SES black vs. Middle-SES black	11 9	4 6		0.65
Lower-SES white vs. Middle-SES white	12 14	3 1	0.299	

*Significant at the 0.05 level.

general concept responses than the black subjects and this was significant at the .05 level. These results are provided on Table XI. The

TABLE XI
QUESTION 22, "WHAT IS A KEY FOR?"
GENERAL AND SPECIFIC CONCEPT
EXPRESSION

Socioeconomic Group	General	Specific	Fisher's Exact
Total black population	0	31	0.12*
vs. Total white population	8	19	

*Significant at the .05 level.

results for item 23 shown on Table XII revealed middle-SES white subjects used general concept answers more often than middle-SES black subjects. This was at the .01 level of significance. Results further indicated the middle-SES white subjects responded with relatively more general concept answers than lower-SES white and black subjects. This was significant at the .10 level and the null hypothesis was rejected; however, this does reveal a tendency toward the .05 level of significance.

Categorization

Refer to Table IV for the complete listing of categorization tasks correctly identified by each subject. To determine if there were significant differences between SES groups on total number of Daberon categorization tasks correctly answered, the mean and standard deviation

TABLE XII
 QUESTION 23, "WHAT IS AN UMBRELLA FOR?"
 GENERAL AND SPECIFIC CONCEPT
 EXPRESSION

Socioeconomic Group	General	Specific	Chi Square
Middle-SES black vs. Middle-SES white	6 12	10 2	7.23**
Middle-SES white vs. Lower-SES white	12 9	2 7	3.09
Lower-SES black vs. Lower-SES white	8 9	7 7	0.09
Lower-SES black vs. Middle-SES black	8 6	7 10	0.79
Lower-SES black vs. Middle-SES white	8 12	7 2	3.55
Middle-SES black vs. Lower-SES white	6 9	10 7	1.85

**Significant at the .01 level.

(S.D.) were calculated. See Table XIII. The mean categorization scores ranged from 5.95 (middle-SES black) to 5.40 (middle-SES white). In determining if there were significant differences in scores between SES groups, t-tests were applied. No significant difference was noted between socioeconomic status or racial groups at the .05 level of significance on a two-tailed test. Refer to Table XIV. The only group which approximated the .05 level of significance were middle-SES white vs.

TABLE XIII

MEANS AND STANDARD DEVIATIONS FOR ALL
RACIAL AND SOCIOECONOMIC GROUPS
ON CATEGORIZATION* TASKS

Socioeconomic Group	$\bar{x}$	S.D.
Lower-SES white	5.87	0.05
Lower-SES black	5.55	1.20
Middle-SES white	5.40	1.41
Middle-SES black	5.93	2.49

*Total score possible: 6.

TABLE XIV

VALUES OF t RELATIVE TO CATEGORIZATION SCORES
FOR THE COMPARISON OF RACE AND
SOCIOECONOMIC STATUS

Socioeconomic Group	$\bar{x}$	S.D.	t	df
Middle-SES white vs. Lower-SES white	5.40 5.87	1.41 0.05	1.46	10
Middle-SES black vs. Lower-SES black	5.93 5.55	2.49 1.20	1.27	10
Middle-SES white vs. Middle-SES black	5.40 5.93	1.41 2.49	1.76	10
Lower-SES white vs. Lower-SES black	5.87 5.63	0.05 1.20	0.34	10

*Significant at the .05 level.

middle-SES black groups. The results show a t-value of 1.76, which is significant at the .10 level, and indicate middle-SES black subjects tended to answer more categorization tasks correctly than middle-SES white subjects.

Intelligence Correlation

To determine the relationship between the children's intelligence quotients (IQ) as measured by the Slosson Intelligence Test for Children and Adults and the Daberon general knowledge and categorization subtest scores, a Pearson's Product-Moment Correlation was calculated. The results indicated a moderately high correlation between the scores with a correlation coefficient of .573 and a z-value of 4.40, which is significant at the .01 level.

Discussion

The primary purpose of the study was to determine if there were any "cultural" or economic level patterns of behavior between four major groups of kindergarten-age children in responding to tasks involving categorizing pictures and recalling general knowledge, using subtests from the Daberon School Readiness Device. This study tested three null hypotheses, which will be discussed in this subsection.

The first hypothesis tested and subsequently rejected in this investigation was that no statistically significant difference exists between the total number of general knowledge concepts correctly identified by: a) the lower-SES white, b) the lower-SES black, c) the middle-SES white, and d) middle-SES black subjects. Results indicated that when interaction of race is considered, a statistical significant dif-

ference exists on general knowledge concepts correctly identified on the Daberon. As shown on Table IV, white subjects correctly identified more concepts than black subjects, and socioeconomic status level did not appear a factor in the difference noted. No significant difference was noted, however, when the same lower- and middle-SES ethnic groups were compared. See Table IV.

Social-class differences in regard to speech and language expression have been an area of concern, and over the past ten years much research has resulted. Cazden (1970) reported from his study on school language problems of lower-class black and white children that social-class differences were not significant enough to correlate with the language problems seen in the classroom. It appeared ethnic differences were a more significant factor in separating the two groups. Many studies examining social-class differences in speech and language expression, however, found the middle-class children exceeding the lower-class on a variety of tasks (Jones and McMillan, 1973; Jeruchimowics, 1971; Gerber and Hertel, 1969; Hertzog et al., 1968; and Scholnick et al., 1968). For a review of these studies refer to Chapter II. In studies which included race and socioeconomic status as independent variables, results indicated that race and SES were significant factors in separating the groups, with the middle-SES white and black subjects performing significantly better than lower-SES white and black subjects (Deutsch, 1965; Entwisle, 1968; and Sitkei and Meyers, 1969). The results of this study of kindergarten-age children from the Portland area in their expression of general knowledge concepts do not appear to agree with previously stated research. In this study regarding correct or

incorrect responses to general knowledge concepts, race was the significant factor and not SES, with the white population performing significantly better than the black population. A possible explanation for the results is suggested by previously mentioned research in Chapter II. It appears that language typically spoken in the home of culturally disadvantaged children, especially lower and middle-SES black children, has a tendency to be poor in context and verbal expression of thought (Gerber and Hertel, 1969). It has been stated by Howard et al. (1970) that children from lower-status families frequently lack the environmental opportunities provided by higher-status families from which valuable academic foundations begin to form. Many questions chosen for the Daberon, according to the manual, were based on the Gesell developmental norms for normal children. Appendix A summarizes the normal developmental skills of a five-year-old (Ilg and Ames, 1972). Results of this study indicate that the white subjects in the Portland area have had more experiences in relating to general knowledge concepts and, consequently, are better able to correctly respond to these concepts.

Individual general knowledge test item scores for each ethnic and SES level were compared for possible statistical significance. As shown on Table VI, four items appeared to separate cultural groups: item 6, "Put your finger on the last one"; item 7, "Put your finger on the second one"; item 8, "Put your finger on the next to the last one"; and item 26, "What is a coat made out of?" Figure 1 illustrates how many subjects in each ethnic and SES group answered these items correctly. Three of the four items incorrectly identified more often by blacks than whites dealt with spatial relations (items 6, 7, and 8).

The subjects were required to indicate, by pointing, which child in a picture of five children in a row approaching a doorway, correctly represented the spatial concept being asked. Item 7 evidenced the strongest significant difference between ethnic groups, showing lower- and middle-SES white subjects performing significantly better than lower- and middle-SES black subjects. No significant difference was

Figure 1. General knowledge items showing a difference between ethnic groups correctly responding to these items.

noted when lower-SES subjects were compared to middle-SES subjects. Significant differences were noted only when blacks were compared to whites, with the white subjects performing significantly better. It appears that kindergarten-age white children can understand and relate to spatial relationships significantly more correctly than black kindergarten-age children. Responses between ethnic and SES groups to items 6, 8, and 26 did not show a statistical significance; however, responses

evidenced a strong tendency toward approaching the .05 level of significance, with white subjects responding more correctly than black subjects, as shown in Figure 1. These results suggest that spatially related concepts such as first, last, second, and next to the last, possibly are expressed more often or specifically taught in white homes than in black homes.

All subjects appeared to have difficulty answering items 28, 29, and 30, in which they were asked to tell how a spoon and a shoe, a bird and a dog, and wood and glass are different. See Table V. The Daberon manual states that these are six-year-old items and require the subject to use a rather high level of abstraction to answer correctly. White subjects performed slightly better than black subjects on these items. The results tend to support Bernstein's (1961) theory, previously stated in Chapter II, regarding elaborate and restricted linguistic code systems. His research concluded culturally advantaged children tend to function within an elaborate code system and are able to verbalize abstractions significantly better than culturally disadvantaged children, who interact within a restricted code system.

The second hypothesis tested and subsequently rejected was that the four ethnic and SES groups reveal no statistically significant difference in response patterns to general knowledge and categorization tasks on the Daberon. The response to items 12 through 30 could be scored correct or incorrect and be further divided into a general or specific answer within the general concept. Bernstein's (1961) theory on restricted and elaborate code systems was used as a guide in classifying general and specific answers. The general answers were consid-

ered conceptually oriented, expressed the overall meaning of the concept, and did not utilize explicit meaning within the total concept. The specific concept answers represented more of a restricted code or linguistic system, were more socially than conceptually oriented, and relied heavily on explicit meanings and not the overall meaning of the concept. For example, a general conceptual response to question 23, "What is an umbrella for?" would refer to the person's overall protection from the rain, and specific conceptual responses would refer to protection of certain parts of the body, i.e., head, hair, and clothes, from the rain.

This analysis of patterns of responses does not evaluate answers as right or wrong but only if the items were answered with a general or specific expression of the concept. Questions could, therefore, be answered with a specific conceptual response and still be considered correct; also, questions could be answered with both a specific and general conceptual response.

An analysis of the total general and specific concept expression results (Table X) revealed a statistically significant difference between ethnic groups, but not SES level. White subjects answered significantly more items with a general concept-type response than black subjects.

A statistical analysis of individual general knowledge tasks (12 through 30) was conducted to determine if any items significantly separated ethnic or SES levels in regard to how they were answered. Results revealed four items (16, 18, 22, and 25) showed a significant difference between general or specific conceptual expression. Figure 2 illustrates

Figure 2. General knowledge items showing a statistical significance between ethnic groups on general and specific types of responses.

how many subjects in each ethnic and SES group answered these items correctly. Responses to item 16, "What does a dentist do?" revealed the greatest statistically significant difference between cultural or ethnic groups, with middle-SES white subjects emitting significantly more general concept answers than middle-SES black subjects. Generally speaking, on this item white subjects responded with significantly more general concept-type responses than black subjects. These results further appear to indicate a significant difference in performance between ethnic groups but not between SES level. Responses to item 18, "What do you do when you are hungry?" revealed no significant difference between lower-SES white and lower-SES black subjects. Middle-SES white subjects, however, answered this item with significantly more general concept answers than middle-SES black subjects. This item showed a tendency to significantly separate middle-class ethnic groups. In answering item 22, "What is a key for?" all groups tended to answer with specific concept responses; however, white subjects were shown to emit significantly more general concept responses than black subjects. Finally, statistical significant difference between groups was found in answers to item 23, "What is an umbrella for?" Middle-SES white subjects emitted more general concept responses than middle-SES black subjects. A summary of all general knowledge questions and how they were answered (Table VIII), reveals white subjects, especially middle-SES white subjects, emitted significantly more general conceptual responses than black subjects. Bernstein (1961) noted that by virtue of class relationship or as a result of common occupational function and social class, social groups tend to develop strong communal bonds. He further classified these

communal bonds into two general types of linguistic code systems (restricted and elaborate) which can be developed within a society. Bernstein believed a child's language is maintained primarily through the process of developing linguistic relations before the child reaches the classroom. These linguistic code patterns, previously outlined in Chapter II, can be seen in the black and white subjects in this study. Generally speaking, white subjects appeared to function within an elaborate code system which does not rely on implicit meanings and utilizes higher level abstract thinking, whereas black subjects appeared to function with the restricted code system, relying heavily on implicit meaning. For example, in item 22, "What is a key for?" black subjects responded in reference to locking or unlocking specific items, such as a door or a garage, as compared to a significant number of white subjects responding with the general concept of the key serving to lock or unlock without reference to a specific item involved with the key. These results also tend to support Williams and Naremore (1969) study in which they found middle-SES white children utilize more elaborate responses when asked to describe or talk about certain topics than lower-SES white subjects. The present study, unlike that of Williams and Naremore, utilized both black and white children from lower- and middle-SES levels. The significant difference noted in use of general vs. specific concepts resulted in an ethnic rather than SES difference. It would appear the white children in this study have been exposed more to an elaborate-type code linguistic system in the home and are, therefore, better able to express thoughts verbally utilizing this type of linguistic code. The black subjects represented in this study, however,

responded significantly more often utilizing a restricted code system which could be considered reflective of the type of linguistic code system evolving from their home.

Categorization responses revealed no significant difference between ethnic or SES level. Figure 3 illustrates how many subjects in each ethnic and SES group responded correctly to categorization tasks on the Daberon. Although categorization responses did not require general or specific answers, items 4, 5, and 6, which required the subjects to name the category represented by the picture, showed a difference in how many responses it took the subject to respond correctly. If the subjects did not answer the first time or started naming individual pictures under the general concept, the examiner was permitted to ask again which general category the pictures represented. In reviewing the number of times each subject was asked to name a category, it was noted that seven of the fifteen middle-SES black subjects were asked again to name the category "food" and correctly responded, whereas only two of the fifteen middle-class white, two of the fifteen lower-class black, and one of the fifteen lower-class white subjects were asked twice what category the pictures represented and correctly responded. Generally speaking, the subjects who were asked a second time tended to name the individual pictures on the first response as opposed to naming the general concept. White subjects named the general concept on the first response to the categorization question more frequently than did black subjects. This evidence appears to further support Bernstein's (1961) restricted and elaborate code theory and also further supports the results of subject's responses to general knowledge using general or specific answers. The

Figure 3. All categorization items on the Daberon School Readiness Device.

categorization questions involved three basic concept areas: food, clothing, and animals. This examiner feels that these concepts are very basic and possibly every child, black or white, comes in contact and becomes familiar with each one. This possibly could explain why there was no significant difference between ethnic or racial groups.

The third hypothesis tested and rejected in this investigation was that no statistically significant relationship exists between scores earned by all subjects on the Slosson Intelligence Test for Children and Adults and those scores earned by all subjects on general knowledge and categorization subtests of the Daberon. Results of the Pearson's Product-Moment Correlation indicate the degree of relationship was statistically significant, revealing a moderately strong relationship between the Daberon subtest scores and the Slosson scores. The results appear to suggest that a child's ability to function in the areas of general knowledge and categorization correlate positively with their general intelligence. General intelligence is, therefore, reflected in the range of an individual's information and his ability to discriminate with and between categories.

CHAPTER V

SUMMARY AND IMPLICATION

Summary

This study sought to determine if there are any "cultural" or economic level patterns of behavior in responding to tasks involving categorizing pictures and recalling general knowledge. The Daberon School Readiness Device (1972), which contains subtests for general knowledge and categorization, was used to assess four groups of children: 1) lower-SES white, 2) lower-SES black, 3) middle-SES white, and 4) middle-SES black. The study involved thirty black and thirty white children between the ages of five years and five years, eleven months. All subjects were screened to determine race, age, auditory acuity, speech intelligibility, subject cooperation, and socioeconomic status (SES). Testing for intelligence was performed at the beginning of the testing situation.

The study was designed to determine whether one ethnic or SES level group would correctly identify significantly more general knowledge and/or categorization items on the Daberon than other ethnic and SES groups. Further, the study sought to determine if there were any significant patterns evident between ethnic and SES groups in the way they responded to general knowledge tasks. Finally, the study was conducted to determine whether there was any statistically significant relationship between scores earned by all subjects on the Slosson Intelli-

gence Test for Children and Adults (1965) and those scores earned by all subjects on the Daberon School Readiness Device (1972).

Results of the study indicate white subjects answered significantly more general knowledge tasks than black subjects. Significant differences also were noted in patterns of responses to general knowledge tasks. White subjects responded significantly more often with general concept-type responses as opposed to specific concept responses than black subjects. No statistical significance was noted between ethnic and SES groups in responding to categorization tasks. Finally, statistical significance was present between Slosson Intelligence Test scores and those scores earned on the general knowledge and categorization subtests of the Daberon School Readiness Device. These results indicate a positive correlation between a child's ability to function in the area of general knowledge and categorization and his general intelligence.

It is postulated that factors which might influence Daberon general knowledge subtest scores and patterns of responses are: 1) the influence of linguistic systems within the child's home environment and 2) the subject's ability to respond by utilizing abstract thinking rather than by relying heavily on implicit meaning.

Implications for Clinic and Future Research

Clinic

The results of this study appear to indicate to classroom teachers and/or speech clinicians that the Daberon could be utilized to devise language enrichment programs in an educational setting. An important part of this enrichment program should be based on providing a more

elaborate linguistic code system for disadvantaged children, especially black children. Bernstein (1961) stated that in the white middle-class population, one tends to find people functioning within both the elaborate and restricted code systems. This study revealed a significant proportion of the white population utilized an elaborate code system in responding to general knowledge concepts, while the black population appeared to function within the restricted code system. This investigator suggests that people who can function within both an elaborate and restricted code system will experience more mobility in the linguistic world. These people, therefore, will not be restricted to exist within a confined environment which limits their mobility within the social structure of the society.

Findings of this investigation also may imply that memory span is an important element in utilizing general knowledge acquired in the school setting. If the child cannot process and recall from memory general information taught in the classroom, his success in school might be very limited. Much of today's educational programming depends upon the child's ability to recall general knowledge. It, therefore, appears that early identification of memory span competence is a necessary area of diagnostic evaluations or screening programs.

Research

This investigator suggests that further research utilizing the Daberon also might include a test for memory span. Different school-aged SES and ethnic groups could be used. Results of the research might indicate a relationship between providing general experiences in the classroom and the child's ability to utilize these experiences.

Also, it is suggested that a more extensive linguistic analysis be done on assessing the types or patterns of responses derived from general knowledge questions. The Laura Lee Developmental Sentence Scoring instrument could be utilized to accomplish a more in-depth investigation of general and specific concept responses. Such analysis would provide extensive information relative to the child's linguistic competence and ability to function within the total society.

Another analysis which might be performed could assess a more extensive categorization test. This investigator believes that the Daberon subtest for categorization is too limited in the scope of items provided to give a representative evaluation of the subject's categorization abilities. A further analysis of categorization abilities utilizing school-aged subjects from varying ethnic and SES levels might provide data showing a significant difference between the groups investigated.

Finally, it is felt that a different intelligence test should be utilized in further research assessing kindergarten-age children. The Slosson Intelligence Test appeared to be an inadequate instrument for this age group, since the intelligence quotient scores were slightly elevated for all ethnic and SES groups evaluated.

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APPENDIX A

GESELL DEVELOPMENTAL PATTERNS FOR FIVE-YEAR-OLD CHILDREN

Five-Year-Olds

The child is typically striving to be good. The child's health is generally very good. Most five-year-olds like to be close to their parents, like to be in the kitchen with mother talking with her, helping and working with her. The mother recognizes the child's desire to please and enjoys having her child around her.

Perhaps no place can better provide five-year-old's needed expansion than kindergarten. The child wants to be told what to do. Fives do best in a morning session of school. The child is ready to do group activities and the new intellectual challenges that school provides. He knows his letters, in part at least, and he can count to twenty; he is alert to new words and repeatedly asks their meaning; he listens well and wants to carry out instructions.

Five may appear shy when approached by an examiner in his classroom and asked to come and play games with her. He is ready for adventure. The examiner reaches a hand out to the child and he usually responds in kind and this makes him feel more secure as he walks down the corridor with the examiner. Most five-year-olds will give their age with ease, a few gesture the number with fingers, and some may need to count their fingers to arrive at their age. Thirty to forty percent of the children know the month of their birthday; the majority simply say,

"I don't know," when asked what month they were born in. The child can usually tell you how old his brother or sister is and their names; however, one question at a time. He often thinks of his family size in terms of including himself in the total figure.

The five-year-old is able to inhibit his approach to the paper and pencil which await him on the table. He is able to answer questions without being distracted by the paper and pencil. The child will pick up his pencil directly with his dominant hand, not picking it up first with the non-dominant hand and then transferring it to the dominant hand. His grasp is usually an easy three-finger grasp near the tip of the pencil. He often confuses letters and numbers, and understands "print" better than "write." A typical five-year-old can print his first name but only a small percentage can print the whole last name. He may or may not know the names of the letters he prints and he prefers to print capital letters. He will often reverse some of his letters. In copying forms, he often names the form before he will draw it. Often he will tell you how he feels about the form: "easy," "simple," or "kinda hard." The conquest of a circle, cross, and square has been relatively mastered within the past two years even though the quality of response has changed with age. He has little difficulty naming common body parts, and carrying out single or double commands.

Five-and-a-half-year-Olds

The cooperative five-year-old is changing into a demanding, opposing child. He tends to combat force with force and by doing so only adds fuel to the fire. The child is gaining a new ability to stand up

for himself. A child of this age is less likely to show the extremes of his personality at school. He is beginning to express himself more freely. His shyness has left him and generally he is quite willing to drop what he is doing and go with an examiner. His body now moves with a looseness, having lost the stiffer erectness characteristic of five. He slips into the chair at the examining table quite naturally and is ready and eager to do whatever he is asked. He definitely knows his age. He is beginning to grasp the idea of a birthdate, especially the month in which his birthday occurs. He can tell you about his brothers and sisters, and accurately reports their ages and names. He can tell you more about his father's occupation than "work," such as build, prints, makes something, etc.

The writing posture is much the same as when he was five, with a good hold on the pencil and the free hand flat on the table. A high percentage of five-and-a-half-year-olds can print their name and over 50 percent can print their last name or first initial of their last name. Typically you can still see some reversals and some substitutions but not as often as when the child was five. The five-and-a-half-year-old has an easier time of copying forms; he can breeze through a circle, square, triangle, cross, and plus. He is beginning to write numbers but you will see many reversals in order and figures. He has the ability to express emotion--tell how a picture of a child looks--sad or happy. He can name common body parts and animals. Games the five-and-a-half-year-old likes are varied; they like to play with objects and prefer gross motor activities outdoors.

APPENDIX B

DABERON GENERAL KNOWLEDGE AND CATEGORIZATION QUESTIONS

General Knowledge

1. What is your first name?
2. What is your last name?
3. How old are you? Fingers used _____.
4. Put your finger on the one in the middle. (Examiner shows picture.)
5. Put your finger on the first one. (Examiner shows picture.)
6. Put your finger on the last one. (Examiner shows picture.)
7. Put your finger on the second one. (Examiner shows picture.)
8. Put your finger on the next to the last one. (Examiner shows picture.)
9. Which is bigger, a tree or a flower?
10. Which is slower, a car or a bicycle?
11. Which is heavier, a stove or a sock?
12. Where do we buy gas?
13. Where would you find a cow?
14. Whom do you go to when you are sick?
15. What does a fireman do?
16. What does a dentist do?
17. What do you do when you are sleepy?
18. What do you do when you are hungry?
19. What do you do when you are thirsty?

20. What are books for?
21. What is a stove for?
22. What is a key for?
23. What is an umbrella for?
24. What are houses for?
25. What is a chair made of?
26. What is a coat made of?
27. What is a house made of?
28. How are a spoon and a shoe different?
29. How are a bird and a dog different?
30. How are wood and glass different?

Categorization

Match to appropriate category

1. Food.
2. Clothing.
3. Animals.

Verbally designate what general category pictures illustrate

4. Food.
5. Clothing.
6. Animals.

APPENDIX C

EXAMPLES OF GENERAL AND SPECIFIC RESPONSES TO GENERAL KNOWLEDGE ITEMS 16, 18, 22, AND 23

General Concept Responses

Specific Concept Responses

Item 16: "What does a dentist do?"

1. Fix your teeth.
2. Examines your teeth.
3. Examines and cleans your teeth.
4. He fixes your teeth.
5. Checks teeth and makes sure you don't have cavities.

1. Take out some of the teeth if they are rotten.
2. Pull your teeth.
3. Take out your teeth.
4. Pull out teeth and wash teeth and give you a toy.
5. Take off one of your teeth and put gold in it.

Item 18: "What do you do when you are hungry?"

1. Go eat.
2. Eat.
3. Get something to eat.
4. You eat.
5. I eat something.

1. If we have some cookies, I get them.
2. You just go to the store or fix lunch, dinner, or snack.
3. Make a peanut butter sandwich.
4. Tell Daddy to buy french fried or hamburger or something.
5. Get up and fix breakfast.

Item 22: "What is a key for?"

1. Locking.
2. Unlocking.
3. Starting a vehicle.
4. Locking and unlocking.
5. Locking, unlocking, and starting.

1. For you open your door, or open your back trunk.
2. Unlock a door.
3. Open the garage or back door.
4. If you want to lock the door or unlock the door.
5. To open somebody door.

General Concept ResponsesSpecific Concept Responses

Item 23: "What is an umbrella for?"

1. For rain so can't get you soaked.	1. Keep rain off head.
2. To keep the rain off you when it's raining.	2. So rain won't get on you with your new school clothes.
3. When it raining so won't get wet.	3. For the rain not get on your hair.
4. Rainy days so you won't get soaking wet.	4. If hair pressed--get umbrella so hair won't get wet.
5. To protect from rain.	5. To cover your head so your head won't get water on it when raining.