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An Investigation of Attitudes Toward the Handicapped Learner

Ann Marie Farrell
Loyola University Chicago

AN INVESTIGATION OF ATTITUDES TOWARD THE HANDICAPPED LEARNER

by

Ann Marie Farrell

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VITA

The author, Ann Marie (Coakley) Farrell, is the daughter of Margaret (Grady) and the late Daniel Coakley. She was born May 19, 1943, in Chicago, Illinois. Her elementary education was obtained in the parochial schools of Chicago and her secondary education was completed in 1960 at the Academy of Our Lady, located in Chicago, Illinois.

In September, 1960, Ms. Farrell entered Chicago Teachers College, receiving the degree of Bachelor of Education in April, 1964. Afterwhich, Ms. Farrell entered Illinois Teachers College and was awarded the degree of Master of Science in education in April, 1966. Presently, Ms. Farrell works as a school psychologist.

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CHAPTER I

INTRODUCTION

The concept of least restrictive environment as defined in Public Law 94-142 has demanded the participation of more handicapped children in the regular classroom environment (mainstreaming). The efficacy of educational programs for the handicapped is reportedly (Reynolds and Greco, 1980; Stagich, 1980; Abramson, 1980) tied to the attitudes of the educators and students, particularly those involved in the mainstreaming process. However, the present outlook with regard to attitudes toward the handicapped is not entirely favorable since many people do not appear to have posiive or even wholesome attitudes toward the handicapped child (preferring to view them in light of their limitations instead of their assets) and many negative attitudinal barriers have been reported to exist in regular education (Stagich, 1980). The results of a number of studies (Baker and Gottlieb, 1980; Kiesler, 1969; Triandis, 1971) designed to determine how regular educators perceive handicapped children have not been very encouraging. Furthermore, the effects of attitudes on behavioral manifestations in the classroom are considered particularly important since attitudes cannot be viewed in isolation (Baker and Gottlieb, 1980).

Governmental mandates tied to program funding would appear to make the systematic study of attitudes as they relate to the

handicapped and the mainstreaming process to be of critical importance. Some practical problems appear to impede the full implementation of mainstreaming in the least restrictive environment as mandated by Public Law 94-142. The success of a program such as mainstreaming is largely contingent upon the attitudes of both the teachers involved in the program and the students participating in the regular education classroom. How can the teachers of the non-handicapped, many of whom previously had limited experience and coursework in the area of special educaton, be expected to provide for the special educational needs of a handicapped child? Current research findings (Condell and Tonn, 1965; Stephens and Braun, 1980; Overline, 1977; Williams, 1977) indicate that both contact with and knowledge of the handicapped are beneficial experiences for the mainstreaming teacher. Furthermore, how can children in the regular classroom be expected to relate positively to handicapped children when most of them have had limited experience and/or knowledge of disabilities? Research with children (Bateman, 1963; Knittle, 1963; Friedman, 1975; Weinberg, 1978; Fleming, 1979; Bursor, 1981; Agness, 1980; Ballard, 1977) supports the notion that increased contact with the handicapped leads to more positive responses. However, other researchers (Knittle, 1963; Siller, 1963; Szuhay, 1961; Budoff, 1978; Parish, 1978; Smith and McCulloch, 1978; Wilkins and Velicer, 1980; DeGrella, 1981; Wisely and Morgan, 1981; Stovall and Sedlacek, 1983) have reported inconsistencies in the attitudes of children as they advance through the grades, noting differences not only in relation to age, but gender as well.

Today, in light of changing societal values, low priority funding is being granted to regular education as well as special education programs. These recent funding cuts which will probably result in program cuts for the borderline classification of special education students will necessitate further demand for acceptance of mainstreaming in concept and in practice by regular educators and students as well. Many of these borderline-atypical students who are now entering the schools have had the benefit of being assessed by using sensitive and highly sophisticated diagnostic tools, the exposure to permissive Parent-Infant programs and the involvement in mandated Early Childhood programs, and are now considered to be likely candidates for the least restrictive environment of the regular school. The question is, are the regular educators and students ready for these borderline-atypical students? When Public Law 94-142 was passed, in 1975, by the U.S. Congress, Dr. Edwin W. Martin, then Deputy Commissioner of Education and Director of the Bureau of Education for the Handicapped in the U.S. Office of Education, stressed the importance of attitudes toward the handicapped in the implementation of the law. He said:

> We must recognize that helping teachers to deal with the uniqueness of children is basically an attitudinal problem.

The benefits of mainstreaming are obvious, not only for the handicapped student, but for the regular education participants as well. In addition to the understanding gained through exposure in the classroom, governmental mandates can be met while at the same time better allocation and utilization of district funds can be achieved. These same districts which are facing declining enrollments resulting

in reductions in force and the eventuality of school closings may benefit from mainstreaming programs which could provide for the needs of the special education student while at the same time augmenting and reinforcing the need for the continued existence of regular education (Thurman, 1980). Today, one of the main barriers to mainstreaming the handicapped appears to be the attitudes of the pupils and teachers involved in the process. Educators must become informed about attitudes: how they are defined, how they are formed and measured, and how they can be changed.

The present investigation was designed to assess regular education teachers and their students' attitudes toward the handicapped learner, and to examine the circumstances and conditions under which the most positive attitudes are fostered. The overall outcome of this research project could provide basic information that would help in the establishment of guidelines for the implementation of a mainstreaming program that could successfully meet the needs of both handicapped and non-handicapped learners. The overall goals of the present research project for teachers and students are as follows:

Goals for Teachers:

1) assess those attitudes toward the handicapped that are prevalent among a sample of regular education teachers.

2) document a difference between the attitudes toward the handicapped learner of the teaching personnel who have had direct experience with the handicapped learner and those teachers without direct experience.

3) identify those personal and demographic characteristics

(background in special education course work) of the teachers which are related to attitudes toward the handicapped learner.

Goals for Students:

1) assess the effect of instruction on the increase in knowledge of handicaps of students in the experimental classrooms contrasted with the control group students.

2) assess the increase in positive attitudes toward the handicapped learner of the students in the experimental classrooms contrasted with the control group students.

3) document a greater number of positive attitudes toward the handicapped in the classrooms which contain mainstreamed students contrasted with classrooms which do not contain mainstreamed students.

4) document a difference in attitudes toward the handicapped between third and seventh grade students.

CHAPTER II

REVIEW OF THE LITERATURE

Public Law 94-142 mandates that an appropriate educational program be provided for all handicapped children. One of the provisions of the federal mandate is to educate the handicapped with the non-handicapped to the greatest extent possible. In providing a program that maintains a "continuum of services" the handicapped individual can be moved into any program that is deemed to be the least restrictive environment for learning. The least restrictive environment is generally considered to be the one in which the child can best perform. One phase of this "continuum of services" involves the concept of mainstreaming. The success of a program, such as mainstreaming the handicapped, is largely dependent on the willingness of regular education to accept the concept in principle. The attitudes of the regular education teachers and students are of critical importance to the acceptance of the handicapped learner into the mainstream of the regular education classroom. Chapter II provides a selective review of the research conducted relative to regular education teachers' attitudes toward handicapped learners. Findings reported here represent research involving both experienced and inexperienced teachers, in addition to trained and untrained teachers, relative to the education of the handicapped. Secondly, the attitudes of students toward their handicapped peers is systematically

reviewed. In a fashion similar to that of the teachers, the research reviewed with respect to handicapped peers centers on two general categories, that which involves both those who have either had contact or have not had contact with the group in question, and those students who have received information or knowledge of handicaps in comparison with those who have received no such knowledge or information on handicaps. Finally, current findings on the assessment techniques which are utilized to measure the attitudes of children are presented, in addition to data collected with these instruments that reveal apparent differences in the attitudes of students relative to gender and age.

Attitudes

Regular education teachers, according to Guttman (1982), tend to prefer special class placements rather than accept the principle of mainstreaming. The vast majority of teachers surveyed (Ysseldyke, Christenson, Algozzine and Thurlow, 1983) felt that factors beyond their control in the regular classroom were responsible for student failures. Sixty percent of another group of teachers responded negatively when questioned about their reactions to having crippled or blind children in their classrooms (Haring, Stern and Cruickshank, 1958). Other research (Chapman and Boersma, 1979; Hudson, Graham and Warner, 1979; Van Osdol and Shane, 1982) appears to indicate that although the exceptional child, with appropriate services, can learn and advance in the mainstreaming environment, many of those involved in their education display negative attitudes relative to their involvement in regular education. Mainstreaming the handicapped

learner is viewed in a negative light by many regular education teachers according to research (Shanker, 1980) and the reasons for that view include the following: a lack of adequate support at the district level; class size is prohibitive; too much time spent with the special student resulting in taking time away from other students; the view that special students would show no gains from participation in the regular classroom; mainstreaming is not determined on an individual basis.

Research (Algozzine and Mercer, 1980; Brophy and Good, 1974; Davis, 1980) has shown that negative attitudes expressed by teachers can undermine the success of the mainstreaming situation. The expectations of these educators may be defined as the predicted probability of the occurrence of a future event. These authors contend that teacher expectations can function as self-fulfilling prophecies. Their findings further indicate that there is a tendency to attach an arbitrary failure label to students who differ from the norm. Other investigators (Brophy and Good, 1974; Silberman, 1969) have shown that teachers hold differential expectations and/or perform differently with children for whom they hold low expectations. In one study teachers were interviewed and asked to indicate those children in their classrooms for whom they felt emotions ranging from attachment to rejection. Rejected children were those whom the teachers preferred to have removed from their classrooms. In observing the teachers' behavior towards these groups of children it was concluded that teachers' attitudes do affect their behavior. High achieving students were criticized less, and praised more often as a

result of teacher attachment.

Research (Williams, 1977) that was conducted with accepting and non-accepting teachers appears to indicate that the teachers were differentiated significantly on contact variables. Those teachers who had experienced more contact with the handicapped displayed more positive attitudes and were consequently more accepting of this population within the classroom. Other survey findings (Overline, 1977) indicated that teachers who reported having one or more years of experience with mainstreaming tended to have more positive attitudes than teachers without this type of experience. Educators involved in a similar study (Coy, 1977) with mainstreamed handicapped students at the primary level displayed a positive gain in attitude toward mainstreaming the handicapped when compared with a control group of teachers.

An adequate understanding and assessment of the mainstreaming process would appear to be mandatory if handicapped students are to receive an appropriate education in that setting. The effects of teacher attitude on the handicapped have prompted further exploration of those variables that are associated with the formation of attitudes and attitude change. As studies (Condell and Tonn, 1965) have indicated those regular education teachers with experience in teaching the handicapped express the most positive attitudes about them, with those having regular education teaching experience having the next most positive attitudes, while inexperienced student teachers display the least positive attitudes. Research (Stephens and Braun, 1980) has further shown that those teachers who felt a sense of confidence in

their abilities to teach the handicapped were more willing to accept them into their classrooms than those who were less confident of their abilities to deal with the handicapped child. Teachers who expressed agreement with the belief that the public schools should educate the handicapped child were also more accepting of that child in their classrooms than those who did not support that belief. And finally those teachers who were found to believe that the handicapped child could, in fact, become a useful member of society were more willing to integrate that child into their classroom than those who did not share this belief.

Many other studies (Kearney and Roccio, 1956; Murphy, Dickstein and Dripps, 1960) have been done using regular education teachers and have included an exploration of the relationship that exists between information about the handicapped and attitudes. There was strong agreement, in a recent study (Hudson, Graham and Warner, 1979) that additional training would aid them in teaching the handicapped child who was mainstreamed into their classroom. They supported the idea that in-service and pre-service training in the area of handicapping conditions would be useful. It has been reported (Boyle and Sletter, 1981) that regular education teachers who had learned about Public Law 94-142 through an in-service program were more aware of and sensitive to the special education student. The researchers point out that in-service needs to be a long term consideration in order to have a maximal effect. The comparative effects of research (Kromer, 1976; Williams, 1977) involving teachers in workshop settings further indicated that those who received instruction in addition to

supplementary materials showed the greatest increases in knowledge which resulted in the most positive attitude changes. Results of a survey (Buletza, 1979) of certified and pre-certified teachers supports the contention that as knowledge of mainstreaming the handicapped increased, an increase in positive attitudes could be measured. Other researchers (Stephens and Braun, 1980) found that teachers who had taken courses in special education were more accepting of special education children in their classrooms than teachers who had not taken such courses. As the number of special education course hours increased so did their willingness to accept handicapped students into their classes. Other researchers (Horne, 1979; Glass and Meckler, 1972; Harawymiw and Horne, 1976) feel that in-service training alone is not enough. After reviewing several attitudinal studies administered to teachers they concluded that providing information or actual contact experiences alone did not sigificantly change attitudes, and that for actual modification of attitudes to take place both information providing and actual contact must be present in the program. The teacher training programs need to show a link between what they are doing in their own classroom with students and the new knowledge that is being presented. In other words the training programs should be both knowledge and experience based. These changes in attitudes will ultimately result in new behaviors only if the participants are presented with experiences in the training situation that are meaningful, and that yield successful outcomes. Further results indicated that teachers developed more positive attitudes towards regular classroom placement for the

handicapped (mainstreaming) and viewed themselves as more capable of teaching handicapped children after having participated in instructional sessions, and planning sessions before teaching the students and participating in parent meetings. Many other researchers report similar positive results when the teachers actually participate in the planning process.

Research with regular education children (Mosley, 1978) points out the effect of peer group acceptance of the handicapped child in the classroom, and stresses the need for a systematic evaluation of the socio-adaptive climate within the mainstreamed educational setting of the handicapped child. There are data to suggest that normal peer group attitudes toward the exceptional child are not positive and the result of that lack of acceptance has proven to be social isolation of the handicapped child in the mainstreamed classroom. The author further stresses that these negative attitudes on the part of the regular education students have further implications for the "modeling" that is assumed to operate within the mainstreamed educational setting. From an academic and economic point of view, mainstreaming could prove to be a viable educational alternative for the handicapped child, but further consideration is warranted in the area of social adaptation. Other studies (Parish, 1978; Westervelt, 1981) involving non-handicapped children's attitudes toward handicapped children have yielded similar negative results. When asked to respond to an attribute inventory in rating handicapped as well as normal children, the normal children were rated most favorably by all of the grade school children involved in the research, while

other investigators affected changes in these negative type reactions through the use of techniques such as a similarity-attraction model. Without this type of intervention negative feelings were expressed with consistency.

Non-handicapped children reacted similarly to their teachers when exposed to handicapped peers in their classrooms. As the amount of exposure to the handicapped population of students was increased (Agness, 1980), the non-handicapped students in the regular classroom had significantly more positive perceptions of the handicapped when compared with those who had no handicapped children within their school environments. Younger children reacted similarly in another study (Bursor, 1981) when exposed to a handicapped student who was acting as a tutor in their classroom. These students, in responding to a questionnaire designed to elicit differences in perceived competencies of handicapped and non-handicapped people, indicated that the students assigned different competencies to handicapped and non-handicapped persons and that these differenes decreased after the children were given the opportunity to interact with the handicapped older child. Junior high students in other studies (Fleming, 1979; Weinberg, 1978; Friedman, 1975) displayed significant positive relationships between contact with handicapped peers and more favorable attitudes toward handicapped persons. Findings suggested two overall conclusions: that as contact between able bodied and handicapped is intensified, the stereotype of the handicapped diminishes; and that, as contact increases, perceived similarity increases thus resulting in significant positive shifts in attitudes.

In another study (Ballard, 1977) middle grade children were randomly assigned to experimental and control groups in order to experimentally assess the social status of non-handicapped classmates with relation to their mainstreamed handicapped peers. Each experimental handicapped child worked in a small cooperative group with four to six non-handicapped classmates on highly structured, manipulative tasks using multiple types of materials. The treatment was provided in two cycles which lasted a total of eight weeks. Sociometric testing, which was administered before and after treatment, revealed that the non-handicapped children's social acceptance of their handicapped peers improved significantly more than that of the control children. Another recent research project (Lehrer, 1981) describes how mainstreaming affects the non-handicapped student's cognitive schema of the handicapped. The mainstreamed exposed students made significantly fewer errors on the recognition memory test that was administered to them, which thus confirmed the prediction that mainstreaming results in a less stereotypic handicap schema among the non-handicapped students.

An analysis of the data available relating to the effects of specific educational experiences on attitudes towards the handicapped reveals that, in many instances, information and training courses pertaining to knowledge of handicaps have proven to be related to the development of more positive attitudes (Meyer, 1963; Schwartzwald, 1981). Other results (Felty, 1965) indicated that specific training courses are not significantly related to the development of positive attitudes toward the handicapped but that the attitudes of upper

elementary school children toward their handicapped peers could be changed significantly in a positive direction by use of a combination of cognitive and affective interventions. Another study (Shein, 1978) reported finding that non-handicapped students who had experienced increased levels of knowledge positively changed their attitudes toward the handicapped, and that the children in the group that were exposed to both lecture and instruction experienced the lowest levels of anxiety in anticipation of contact with the handicapped. Other studies (Marsh, 1972; Scheffers, 1977; Monson and Shurtleff, 1979) have also provided support for the notion that increased knowledge results in the development of more positive attitudes toward the handicapped. Multi-media approaches including role playing activities are stressed in research (Westervelt, 1981) on the attitudes of non-handicapped peers toward their handicapped counterparts, and these multi-media strategies were found to contribute to gains in positive attitudes. Results from other studies (Harte, 1980) have indicated that a program of empathy training facilitated the development of more positive attitudes in children, while other research (Shortridge, 1982; Terrell, 1981) utilized teaching units which included discussion of therapeutic equipment in order to effect increases in positive attitudes toward handicapped peers. It is apparent that further experimentation conducted in this area should employ more rigid control measures, so that conclusions may be drawn regarding the effects of specific educational programs relative to gains in positive attitudes expressed toward the handicapped learner.

Attitude Assessment Techniques

In view of the research findings which are presented above, it appears that in order to successfully implement a mainstreaming program, the attitudes of the students in the regular classroom must be critically evaluated. Many approaches have been utilized in order to accurately assess the attitudes of non-handicapped students toward their handicapped classmates. A rating scale (Bateman, 1962) for use with non-handicapped children was developed in order to rate the activities which the students felt that the handicapped children could master. The author found that the total test scores and the percentages of positive responses in each area covered bore a direct relationship to the amount of contact that the student experienced with the particular handicapping area involved. This finding is consistent with previous findings. In another study (Knittle, 1963) subjects who had contact with the handicapped, in this case a disabled sibling, were found to have more positive attitudes than those who had no such contact. Knittle utilized a Likert-type five point rating scale in his project. A method often used with children for assessing attitudes toward handicapped children is the sociometric choice technique. Force (1956) studied the social status of disabled children in the elementary school by using a "near-sociometric" instrument, in which the children were asked to choose other students as friends, playmates, and workmates. Other studies (Freeman and Sonnega, 1956; Soldwedel and Terrill, 1957) also used the sociometric method to test hypotheses about children's social acceptance of specific handicapping areas. In other reserch (Szuhay, 1961)

sociometric methods were again found to be the most suitable for use with children. This particular sociometric measure of social distance has the advantage of being an objective scorable measure. The author's findings indicated that female children showed more positive attitudes toward the handicapped than did males when the Children's Picture Sociometric Attitude Scale was utilized. In a similar study (Moed, Wight, Feshback and Sandry, 1963) which measured attitudes on the Children's Seashore Picture Story Test, the female children were reported to be more positive in measured attitudes toward the handicapped. Boys responded more negatively to peers who appeared to be academically incompetent but were not "labeled" as having a problem in another research project (Budoff, 1978). Smith and McCulloch (1978) reported the results of a specially designed assessment inventory that was administered to students in Britain and the United States. The results were compared in validated scores. The findings demonstrated that although there were some differences between the countries, there were also general similarities between the two countries. In both countries the females scored higher than the males. By contrast, in another research project (Wisely and Morgan, 1981) results indicated that the boys responded more favorably than the girls who were examined. The author further discovered that the third grade children responded more favorably than the sixth grade children, although another researcher (Wilkins and Velicer, 1980) reported finding no differences between third and sixth graders on attitudes expressed toward certain stigmatized groups. The expressed preferences of the children participating in another investigation

(DeGrella 1981) revealed that the bias against disabilities appears to increase with age, with chronological age being a better predictor of prejudice against the disabled than mental age. In general, it appears that the research findings indicate that a relationship may exist between educational level and attitudes toward the handicapped, however, inconsistencies in research findings suggest that further exploration is needed in this area.

In summary, research in the area of attitudes toward the handicapped reveal an overall pattern of negative findings on the part of regular education teachers and regular education students who have not been exposed to either handicapped students, or a program designed to increase specific knowledge of handicaps. Since the placement of the special education student in the least restrictive environment is a mandated component of Public Law 94-142 these findings reinforce the need for an organized effort in order to establish a mainstreaming effort that will be of benefit to regular education teachers, regular education students, and the handicapped student as well. Consideration should be given to all research in the area of attitudes toward the handicapped in planning successful "contact" or mainstreaming experiences. Those researchers generally agree that the teachers who had experienced more contact with the handicapped learner within their classrooms, as well as those students who had been exposed to mainstreamed peers, displayed more accepting attitudes toward the handicapped learner. Teachers who relate that they have completed course work in special education and/or have participated in in-service programs relating to handicaps, as well as children who

have been exposed to knowledge based programs relating to the handicapped have, for the most part, shown positive increases in attitudes. It is generally agreed that the sociometric technique, or some form of it, provides the most successful measure of attitude in children, but through the use of this type of assessment tool inconsistencies have been noted in the attitudes of children toward the handicapped relative to gender and age. It is apparent that further experimentation in this area should employ more rigid control measures so that specific conclusions can be drawn.

Theoretical Rationale

Social actions are directed by attitudes. Through a knowledge of attitudes, it is possible to do something about the prediction and control of behavior. Attitude is comprised of an affective and a cognitive component. The affective, or feeling component of an attitude refers to the emotions connected with the object or person. An attitude is originally formed within the context of the affective and cognitive components, but it can be influenced by the action tendency component which includes all of the behavioral readiness associated with the attitude (Kimble, 1963).

According to Kimble, the behavior that is related to attitude can exert an influence on the affective and cognitive components of attitude. The types of behavior under investigation, specifically the experience of being exposed to mainstreamed handicapped learners in regular classroom settings and/or receiving additional information about handicaps through coursework or the treatment condition will alter the attitudes of regular education teachers and students at

selected grade levels.

The theory of cognitive dissonance (Festinger, 1957) appears particularly applicable as a theoretical anchor for the present investigation. This theory states that when a person has inconsistent items of information or "nonfitting" relations among the cogntive elements relative to the environment or himself he or she will experience a psychological state of tension called "dissonance." When cognitive dissonance is experienced, which expresses itself as a discrepancy between existing information and new information, a person remains in a state of unrest until the difference is reconciled. Once dissonance exists the pressure to reduce it manifests itself in attempts to increase the attractiveness of the chosen alternative. This state of dissonance has drive properties which serve to motivate the individual to try to reduce or eliminate the state of tension induced. The tension reduction results in reinforcement.

The regular education teachers involved in the present investigation could experience dissonance if handicapped students were placed in their regular classroom settings. For example, the teacher may realize that he or she and the handicapped learner will, inevitably, be in close contact. The teacher may experience dissonance. The teacher, or student as the case may be, will seek out ways to convince himself or herself of positive characteristics. Since most teachers propose to be philosophically committed to the ideal of the innate worth of all children, which dictates an appropriate educational experience for all children which requires that all children have a right to a public education they must

reconcile this philosophy with underlying feelings of opposition to the concept of mainstreaming the handicapped learner. Regular education students, as well, experience similar dissonance when confronted with someone who is perceived as "different" from them. These children, who are influenced by the importance of controlling one's body, may find it frightening to interact with a child who lacks that control. They may feel confronted with the possibility of losing some physical capability that they have taken for granted and this feeling causes them to shut out any individual who displays dependency. These situations instill a sense of mystery and fear and may introduce dissonant feelings. Research (Westervelt, 1981) has shown that a similarity-attraction model has been successfully utilized in order to reduce children's dissonance. Festinger supports this notion by stating that it is possible to reduce the total magnitude of dissonance by adding new cognitive elements. Through the introduction of increased knowledge of handicaps, stressing the notion that the regular education students are more similar to the handicapped learners than they are dissimilar, a reduction in dissonance was realized on the part of the non-handicapped students. As a result of the dissonance reduction, the attitudes of the non-handicapped students toward the handicapped learner showed a positive gain.

Recapitulation

We live in a nation in which federal law mandates that handicapped learners be educated with the non-handicapped to the greatest extent possible. Public school personnel have responded to

that mandate by providing a "continuum of services" whereby the handicapped learner can be moved into any program that is deemed to be the least restrictive environment in which he or she can best achieve. When this type of learning takes place in a regular classroom, it is called mainstreaming. It is reported in the literature that the success of a mainstreaming program is largely dependent on the attitudes of regular education teachers and the regular education students in their classrooms.

Previous research findings have indicated that regular education teachers tend to prefer special class placements rather than accept the mainstreamed handicapped learner into their regular classrooms (Guttman, 1982). Many regular education teachers place blame for mainstreaming failures on factors beyond their control (Ysseldyke, Christenson, Algozzine and Thurlow, 1983; Shanker, 1980). Despite the passage of Public Law 94-142, these findings closely resemble the responses of a large group of regular education teachers who were surveyed relative to their reactions to having students with various handicaps within their regular classrooms. Sixty percent of this group responded negatively when questioned on this topic (Haring, Stern and Cruickshank, 1958). Many educators agree that handicapped learners are able to advance and learn in the mainstreamed environment. However, many of the teachers involved in the educational process reportedly display negative attitudes relative to the handicapped learners' involvement in regular education (Chapman and Boersma, 1979; Hudson, Graham and Warner, 1979; Van Osdol and Shane, 1982). It is assumed that negative attitudes can undermine the

success of the mainstreaming program, primarily due to the fact that teacher expectancies serve to attach "failure labels" on those students who differ from the norm and there is some evidence to suggest that teachers tend to behave differently with children for whom they hold low expectations (Brophy and Good, 1974; Silberman, 1969).

When viewing the regular education teaching population, relative to accepting and non-accepting attitudes toward the handicapped learner, the groups were found to be significantly differentiated on direct contact variables. In general, those teachers who had experienced more direct contact with the handicapped learner displayed more positive attitudes and were consequently more accepting of this population within their classrooms and more confident of their ability to deal effectively with their needs (Williams, 1977; Overline, 1977; Coy, 1977; Stephens and Braun, 1980).

Many teachers of regular education classrooms have expressed the feeling that additional training in special education would aid them in teaching the handicapped learner within their classrooms. This instruction could take the form of formal special education course work, in-service training, or workshops within their school district (Hudson, Graham and Warner, 1979; Boyle and Sletter, 1981; Stephens and Braun, 1980). The attitudes toward the handicapped learner of the teacher participants involved in the present investigation were compared on the variables of both experience/non-experience with handicapped learners, and training/non-training in handicapping conditions in order to determine the effect of these factors on the

resultant measured attitudes.

The attitudes of regular education students are also considered to be of considerable importance to the success of proposed mainstreaming programs. Non-handicapped students, when questioned on the subject, do not display positive attitudes toward handicapped learners and the result of that lack of acceptance has proven to be the social isolation of the handicapped learner within the mainstreamed classroom (Westervelt, 1981; Parish, 1978; Mosley, 1978).

Non-handicapped children reacted similarly to their teachers when exposed to handicapped peers in their classrooms. Although many differences in studies can be noted, it can generally be stated that as the amount of exposure to the handicapped increased, more positive perceptions of the handicapped learner were documented on the part of the non-handicapped students (Bursor, 1981; Agness, 1980; Fleming, 1979; Lehrer, 1981).

Furthermore, it has been revealed that, as in the case of teacher attitudes toward the handicapped learner, training courses and activities relating to handicapping conditions have proven to be related to the development of more positive attitudes toward the handicapped (Schwartzwald, 1981; Westervelt and Turnbull, 1980; Shortridge, 1982; Terrell, 1981). In the present investigation, the student participants were assessed relative to growth in knowledge of handicaps that resulted from the presence or absence of exposure to a training program, within a mainstreamed or non-mainstreamed setting.

A wide variety of assessment techniques have been utilized in order to accurately assess those attitudes of regular education

students that relate to the acceptance of handicapped students in the regular classroom setting. Rating scales, including Likert scales, have been utilized for this purpose with varying degrees of success (Bateman, 1962; Knittle, 1963). Other researchers have reported greater success with sociometric and "near sociometric" instruments which were utilized in order to assess the attitudes of child participants in relation to their classmates. This type of sociometric measure has yielded consistent data relative to attitudes as they pertain to age and gender. In view of these findings, a sociometric instrument, specifically a measure of social distance, was chosen for use in the present investigation.

Using the Kimble Model of attitude formation and the Theory of Cognitive Dissonance as theoretical anchors in the present investigation, it was hypothesized that direct experience with handicapped learners and/or knowledge of the handicapped should lead to increased positive attitudes toward the handicapped learner on the part of both the participating regular education teachers and regular education students.

CHAPTER III

METHOD

Hypotheses

The following null hypotheses were tested:

1. There will be no significant differences between the number of positive attitudes expressed toward mainstreaming the handicapped (as measured by the Classroom Integration Inventory) of teachers who have had previous mainstreaming experience and those teachers who have not had this experience.

2. There will be no significant differences between the number of positive attitudes expressed toward mainstreaming the handicapped (as measured by the Classroom Integration Inventory) of teachers who have completed special education course work and/or inservice instruction in the area of special education and those teachers who have not had this training.

3. There will be no significant difference between the performance of the children in the treatment groups (Groups I & III, exposed to the Project Change condition) and the performance of the children in the control groups (Groups II & IV, not exposed to the Project Change condition) on the Skill Attainment List.

4. There will be no significant difference between the performance of the children in treatment Group III (Non-Mainstreamed, and exposed to the Project Change treatment condition) and the

performance of the children in the control Group IV (Non-Mainstreamed, and not exposed to the Project Change treatment condition) on the Children's Picture Sociometric Attitude Scale.

5. There will be no significant difference between the Group II (Mainstreamed, and not exposed to the Project Change treatment condition) children's performance and the performance of the Group IV (Non-Mainstreamed, and not exposed to the Project Change treatment condition) children on the Children's Picture Sociometric Attitude Scale.

6. There will be no significant difference between the performance of the third and seventh grade students on the Children's Picture Sociometric Attitude Scale.

Statement of the Directional Hypotheses

1. There will be a significant difference between the number of positive attitudes expressed toward mainstreaming the handicapped by teachers who have had previous mainstreaming experience and those teachers who have not had this experience. A number of investigators (Kearney and Rocchio, 1956; Murphy, Dickstein and Dripps, 1960) have reported that there appears to be a positive relationship between information about the handicapped and the development of positive attitudes toward the handicapped as well as the development of positive side-effects related to teaching experience and contact with the handicapped learner. It has been found (Condell and Tonn, 1965) that the teachers with experience in teaching the handicapped held the most positive attitudes, those with regular education classroom experience followed and the least positive attitudes were held by the

inexperienced. Therefore, in the present investigation, the teachers who have had experience with mainstreaming, are expected to score significantly higher on the attitude measure toward the handicapped (CII), since direct experience over a period of time is considered to positively effect the attitudes developed.

2. There will be a significant difference between the number of positive attitudes expressed toward mainstreaming the handicapped by teachers who have completed special education course work and/or in-service in the area of special education and those teachers who have not had this training, since survey results (Buletza, 1979) of certified and pre-certified teachers have indicated that as knowledge of mainstreaming increased, positive attitudes also increased. Other research findings (Stephens and Braun, 1980) have shown that teachers who had taken courses in special education were more accepting of special education children in their classrooms than teachers who had not taken such courses. As the number of special education course hours increased so did the teachers willingness to accept handicapped students into their classes. There was strong agreement reported in another study (Hudson, Graham, and Warner, 1979) that additional training would aid teachers in teaching the handicapped child mainstreamed into their classroom. That is to say, that the teachers supported the idea that in-service and pre-service training in this area would be helpful. In the present investigation, the teachers who have completed special education course work and/or in-service in the area of special education are expected to have more positive attitudes toward the handicapped. However, some researchers

(Horne, 1979; Glass and Meckler, 1972; Harawymiw and Horne, 1976) have reported that in-service training alone is not enough to encourage the development of positive attitudes toward the handicapped. After reviewing several attitudinal studies it appears that providing information or actual contact experiences alone will not significantly change attitudes, and that for actual modification of attitudes to take place, both information providing and actual contact must be present in the program. Therefore, in the present population of teachers, those teachers who report on the Demographic Information Form that they have experience with mainstreaming and special education course work or in-service are expected to achieve the most positive attitudes toward the handicapped as measured by the Classroom Integration Inventory (CII).

3. There will be a significant difference between the performance of the treatment group subjects and the performance of the control group subjects on the Skill Attainment List (a measure of knowledge of handicaps). Although there are little data available related to the effects of specific educational experiences, findings from a study conducted by Shortridge (1982) indicated that information and training courses pertaining to knowledge of handicaps resulted in an increase in knowledge which was related to the development of more positive attitudes toward the handicapped. However, findings from other studies (Felty, 1965) have indicated that specific training courses were not significantly related to the development of more positive attitudes toward the handicapped because other variables present in the experimental situations (no control of variables such

as age, gender, intelligence, contact, etc.) appeared to confound the effect of the educational intervention. The present investigation was designed to control for those variables that appear to have a confounding effect (age, gender, intelligence, socio-economic level) in order to assess the impact of the specific educational program (measured by the Skill Attainment List) at the appropriate grade level.

4. There will be a significant difference between the performance of the subjects in the treatment group and the performance of the subjects in the control group on the Children's Picture Sociometric Attitude Scale. Studies have shown that specific educational experiences, information and training courses (Meyer, 1963) which pertain to knowledge of handicapping conditions have a positive relationship to positive attitudes. Other researchers (Papcum, 1964; Wyrick, 1964) have provided support for this positive relationship when using pre- and post-test designs with an interpolated educational experience in order to measure subsequent changes in attitude toward the handicapped. Therefore, the treatment Group III students (Non-Mainstreamed, and receiving the Project Change treatment condition), after exposure to the Project Change materials at the appropriate grade level, are expected to display significantly more positive attitudes toward the handicapped than the control Group IV students (Non-Mainstreamed, and no Project Change Treatment condition).

5. There will be a significant difference between the Group II (Mainstreamed, and no Project Change Treatment condition) subjects

performance and the performance of the Group IV (Non-Mainstreamed, and no Project Change Treatment condition) subjects on the Children's Picture Sociometric Attitude Scale. Since Group II is the classroom that contains mainstreamed students, with Group IV containing no mainstreamed students, it is expected that the group with the exposure to the handicapped will score significantly higher on the attitude measure. Direct relationships (Bateman, 1962; Knittle, 1963) have been reported between total test scores and the percentages of positive responses on attitude measures to the amount of contact that was experienced with particular handicapping conditions.

6. There will be a significant difference between the attitude toward the handicapped of third and seventh grade students because research (Knittle, 1963; Siller, 1963; Szuhay, 1961) indicates that a relationship may exist between educational level and attitudes. Other researchers (Moed, Wight, Feshback and Sandry, 1963; Smith and McCulloch, 1978; Budoff and Siperstein, 1978; DeGrella, 1981) have reported differences in attitudes which appear to relate to gender. However, many inconsistencies have been reported in the literature (Wilkins and Velicer, 1980; DeGrella, 1981) which have been explained as reflecting the importance of social pressure rather actual expressions of attitudinal preference.

In the present study an attempt will be made to control the effects of both the training programs that would increase knowledge of handicaps, and contact variables that would be related to the exposure in mainstreaming situations that could influence attitudes toward the handicapped learner.

Sample

The sample consisted of 46 teachers in two elementary (n = 30 teachers) and one junior high (n = 16 teachers) regular education centers. Two of the regular education centers house one or more of the following types of special education programs: 1) self-contained district and/or cooperative cross-categorical programs (learning disabled/educable mentally handicapped); 2) low incidence regional agreement handicapped programs (visually handicapped programs, multiply handicapped, and orthopedically impaired. The third regular education center does not presently have, nor has it had for the past 10 years, any type of self-contained special education program.

In addition to the teachers, a sample of 40 children was selected from four classes of third grade children, two of which were located in the building with special education mainstreaming, and the other third grade classes were located in the elementary building which does not contain special education classes and therefore had no mainstreamed students. Group I (n = 10) had exposure to mainstreaming and received treatment (Project Change). Group II (n = 10) had exposure to mainstreaming but received no treatment. Group III (n = 10) had no exposure to mainstreaming but received treatment (Project Change). Group IV (n = 10) had no exposure to mainstreaming in the classroom and no treatment (Project Change). Four classes of seventh grade students (10 from each class) from the junior high building were also utilized. Again, these classes differed in the presentation of treatment (Project Change) and the presence or absence of mainstreamed

students. A sample of 10 students (five girls and five boys) was chosen from each class for assessment purposes. Student subjects were all within the normal range (IQ = 90-110), and of average socioeconomic status (based on current census data). Finally, the teachers involved in the treatment and control classrooms displayed neutral (scores in the 140-220 range) attitudes toward the handicapped as measured on the Classroom Integration Inventory.

Procedure

The study was conducted in two stages. The first stage consisted of the administration of the Classroom Integration Inventory (CII) (see Appendix B for details) used to assess the preference of the teachers with relation to the handicapped children. In addition, teachers were requested to complete the Demographic Information Form (see Appendix C for details) designed to categorize the selected subjects into special education experience and training categories. The questionnaire materials were disseminated to the building principals of the schools selected to participate. The principals were requested to distribute the Demographic Information Forms, the CII, and the return envelopes to all teachers in their buildings. All teachers were asked to complete the information form and the test instrument, place it in the envelope provided, seal it, and then return the envelope to the building principal within one week of receipt of the material. These data were then collected from the building principal.

The second stage of the study involved the careful selection of five male students and five female students, while controlling for

similarities in intelligence and socioeconomic level across gender, from the eight classes chosen to participate (four third grade and four seventh grade classes). Arrangements were made with the principal of each participating school for the investigator to administer the Children's Picture Sociometric Attitude Scale (CPSAS) to the selected subjects. A program aide was utilized to secure the subjects, subject to the student's availability and consent. Prior to the administration of the test, the following information was obtained by the aide from each child involved and recorded on the Children's Picture Sociometric Attitude Scale score sheet: name, address, city, sex, age, date of test, and a code number. The investigator scored each test and recorded the coded results on a master work sheet. For the purpose of testing the null hypotheses, the children were grouped by grade (third and seventh) and gender.

Description of the Project Change Treatment Condition

The ongoing Project Change Program had been in operation in the school district utilized in the present study for three school years. The overall purpose of the Project Change Program is to create positive attitudes toward the handicapped. To this end, non-handicapped children and their teachers are provided with first-hand experiences and knowledge about various handicapping conditions. The suggestion is that the negativism felt for the handicapped can be reduced and replaced by positive attitudes if a systematized body of information about handicaps is provided. Pre- and post-testing of attitudes toward the handicapped, utilizing the Primary Attitude Survey or the Junior High Attitude Survey developed

for use with Project Change (see Appendix D for details) permits one to determine if such growth takes place, and enables one to compare this growth with the growth, if any, that takes place through mere exposure to the Project Change treatment condition. Project Change provides a sequentially organized curriculum. The units at the grade levels include three sections: The Introduction, including objectives and concepts; Activities; and Bibliography. The Introduction provides the rationale and basic background information for the unit. The behavioral obectives state the desired student responses. The activities section is composed of a series of lesson plans. Each lesson plan includes: A. Objectives; B. Materials; and C. Procedures. The curricula at both the third and seventh grade level consists of various types of activities. Included activities are: simulation activities where students experience handicapping conditions, filmstrips, movies, books, and guest speakers. Objectives, materials and activities presented at the seventh grade level is similar to the information presented at the third grade level, but it is somewhat more advanced in scope (see Appendix D for details).

In the present investigation, the students in grades three and seven were pre-tested and post-tested in order to determine growth in skill levels. The students in grade three were given the Primary Skill Attainment List. This individually administered checklist was designed as a component of the Project Change treatment in order to measure knowledge of handicaps in children at the primary level. The checklist is untimed and requires an oral response (see Table A for further information). The seventh grade students were given the

Junior High Skill Attainment List. This instrument is group administered and is a multiple choice test administered by the classroom teacher. It is specifically designed for Project Change in order to measure the knowledge of handicaps presented in the student curriculum (see Table A for further information). The children also were pre- and post-tested relative to their attitudes toward the handicapped as a component of the Project Change Treatment Condition. The third grade children were given the Primary Attitude Survey which is an individual multiple choice (5 option) thirty item instrument designed to provide an estimate of the non-handicapped subject's attitude toward handicapped individuals. The seventh grade students were given the Junior High Attitude Survey which is a group test that is administered to the class by the teacher. This instrument was specially designed for Project Change to measure attitudes in specified areas (see Table B for further information).

Instrumentation

The Classroom Integration Inventory

The Classroom Integration Inventory (CII) (see Appendix B) developed by Haring, Stern and Cruickshank, was used to assess social distance (a measure of acceptance of educators with respect to the mainstreaming of handicapped children into the standard educational program).

The CII covers ten areas of exceptionality with a total of six (6) items representing examples that are slight to severe in scope. The authors describe the ten areas of exceptionality as follows: Behavior Disorders, Emotional Disturbance, Impaired Hearing, Impaired

Speech, Impaired Vision, Orthopedic and Cardiac Disorders, Physical Attractiveness, Seizures, Retarded/Superior Intellectual Ability, and Bowel and Bladder Incontinence.

The Classroom Integration Inventory consists of 60 behavioral descriptions of exceptional children. Six items are included for each handicapping area. The classifications represented were not always clear due to the overlap among the designations. A cross section of various degrees and types of handicapping conditions are presented by the slight to severe descriptions of each handicapping area.

The teacher respondents were asked to choose what they considered to be the best educational setting for each student described. Their choices were based on a continuum of five educational placement alternatives. They were then instructed that they alone were responsible for the placement decision.

The Classroom Integration Inventory yields an attitude score that is calculated directly from the teachers' placement decisions and utilizes a five-point scale ranging from regular classroom placement to exclusion from the public school setting (5-1). The total attitude score is calculated by adding the responses to the 60 presented items. The total score reflects attitudes toward a cross section of types and degrees of handicapping conditions.

The choices available to the teachers, representing a continuum of service provision, are the following: (1) moving the child farther from the regular classroom; (2) increase of support services provided to the regular classroom teacher; (3) decreased involvement on the part of the regular class teacher. The choice that the teacher makes

on the Classroom Integration Inventory are viewed as a measure of attitudes toward the handicapped, in other words, social distance, being represented by how near or far away from the regular class the teacher felt the particular student should be placed. Haring, Stern, and Cruickshank report a split half reliability of .84 (corrected). The alpha coefficient for the administration of all 60 items is reported as .94 (corrected).

The demographic information requested from the participating teacher respondents includes: age, gender, years and type of teaching experience, educational training, present position, semester hours completed in special education course work, in-service hours in special education, present and previous experiences in mainstreaming (see Appendix C for details).

The Children's Picture Sociometric Attitude Scale

The Children's Picture Sociometric Attitude Scale was used to assess the attitudes of students toward the handicapped. This particular device was developed by Joseph Szuhay (1961) and has proven to be an encouraging approach to the measurement of children's feelings toward other children in group situations or activities. This sociometric measure differs from others in that choices are not made of actual persons, but rather of pictured persons in social and academic situations. The student was asked to identify with the child in the picture and the child was requested to choose one of five children to accompany him or her in the situation presented. Hence this measure can be viewed as a measure of social distance, with points given depending on the amount of distance the student places

between him or her and the handicapped children. Some similarity can be noted between this instrument and the measure of social distance administered to the teachers who are participants in the present study (CII). The correlation between the Project Change Attitude measures and the Children's Picture Sociometric Attitude Scale is expected to be high.

The sociometric test is a technique for measuring the extent to which individuals are accepted by other group members. The choices are based on criteria which reflect actual situations or activities that meet this requirement of choosing associates based on criteria related to living in close proximity, working in close proximity, and spending leisure time together.

Drawings of social situations in which a physically disabled, hearing impaired, or visually impaired child could participate with a non-disabled child are presented. Respondents are instructed to identify themselves as the non-disabled participants in the activities. An attempt is made to include criteria which covered the main aspects of group members personal and social relationships.

Using a fixed number of choices has statistical and practical advantages (Bronfenbrenner, 1944). Research has shown that five choices can be made without difficulty and provide the most stable sociometric results (Gronlund, 1955). Therefore, five individual sketches of children are presented to participants to represent the groups from which the subjects would select in order to complete the social situation.

Since children in the elementary school grades show sexual

cleavage in their sociometric choices (Gronlund, 1959), the five individual sketches and the social situations depict boys and girls separately.

Ten social situations in which a physically handicapped, visually impaired or hearing impaired child could participate are presented. Each social situation depicts a non-handicapped boy, a non-handicapped girl, and a chair or area that is vacant that has to be filled in by one of the five individual sketches to be chosen by the subject. Of these five separate sketches, one is drawn as a physically handicapped child with crutches, another as either a visually or hearing impaired child, and the other three representing non-handicapped children.

The figures on the social situation sketches are planned to represent children eight years of age, approximately the mean age of the subjects in the present research project (third graders), and children twelve years of age, the mean age of the seventh graders. The two sets of five sketches are proposed to resemble children of the suggested ages of eight and twelve. One set illustrates the child in the standing position and a second set in the sitting position. A set of boys are drawn for each of these ages and for both positions in addition to a set of girls, therefore the participants could choose from figures of their own sex and of approximately their own age (see Appendix E for an example).

The ten social situations presented for use in the present investigation were the following:

(1) sit by you in class

(2) come to your party

(3) play card games with you

(4) go home with you for lunch

(5) sit by you on the bus

(6) go with you to the movies

(7) study with you at school

(8) help you clean up the yard

(9) live next door to you

The tenth item was utilized to determine whether or not the subjects were making their choices with care, or not paying attention to the situation and seriously weighing the possibility of the handicapped child's performing the task within the social situation. The tenth situation was:

(10) choose to be the fastest runner.

The handicapped child wearing the leg brace and on crutches, or the visually impaired child, could not be the fastest. Therefore if the subject chose these responses they were not included in the study, and another subject was randomly selected from the original pool of possible participants.

The standardized procedures for administering and scoring the CPSAS were as follows: The scale was originally designed by Szuhay to be administered individually to elementary school children and utilizes a modification of the sociometric technique. The drawings are presented to the subjects on a table or desk. The individual sketches of boys and girls at ages eight and thirteen are numbered on the reverse side from one to five, with the physically handicapped child designated as number 2, and the hearing impaired or visually

handicapped child designated as number 4. The order of presentation of the set placed facing the students along side of the social situation is as follows:

Situation #1 Cards 1, 2, 3, 4, 5

Situation #2 Cards 2, 3, 4, 5, 1

Situation #3 Cards 3, 4, 5, 1, 2

Situation #4 Cards 4, 5, 1, 2, 3

Situation #5 Cards 5, 1, 2, 3, 4

Situation #6 Cards 1, 4, 3, 2, 5

Situation #7 Cards 4, 3, 2, 5, 1

Situation #8 Cards 3, 2, 5, 1, 4

Situation #9 Cards 2, 5, 1, 4, 3

Situation #10 Cards 5, 1, 4, 3, 2

When the scale is administered to boys, the figure of the girl on the social situation card is shielded by a cover. The set of five cards from which the subject is to choose are of his own sex. The male figure on the sketch of the social situation is covered when girl subjects are tested and the set of five drawings are female children.

The examiner displays the Social Situation Card #1 on the table in front of the seated child. The five sketches of children in the sitting position, matching the sex and age of the subject, are side-by-side to the right of the social situation card. Verbal directions given to the student were as follows "Let's pretend this is you here"(pointing to the figure of the subjects sex on the social situation card).

"Which of these children (pointing to individual sketches) would

you like to have sit next to you in class?"

After the student chooses, the choice is recorded and removed. The student was then asked:

"From the remaining children, which would you choose next?"

The examiner removed and recorded the second choice in the appropriate box on the score sheet after the student made the selection.

This procedure was followed for the third and fourth choices and then the remaining card was removed and its number recorded. The Situation Card #1 was also removed and set aside.

The examiner then placed Social Situation Card #2 on the table facing the student and the set of five sketches of the children in the standing position as indicated in the instructions for Card #1.

This procedure was followed for the remaining Social Situation cards until the student had made selections from the sets of five children to each of the ten situations. Scoring the selections recorded on the score sheet was done in the following manner:

(a) If the subject chose the individual in the same sequence as presented to any of the ten Social Situations, his or her responses were not regarded as accurate. A substitute subject was then chosen for the study.

(b) Another criterion which each subject had to meet was the selection of the drawing of the physically disabled child, or the hearing or visually impaired child, as fifth choice to the Social Situation Card #10. If the subject chose the disabled child as the faster runner than any of the non-disabled children in the set, his or

her responses were considered not accurate and another subject was selected at random from the class.

In order to determine the scores of the student, selections on Social Situation Card #10 were not tabulated but used for the above mentioned purposes.

The number of times the drawing of the disabled child (No. 2 and 4) was chosen first is counted for the nine remaining social situations and recorded on the designated area on the score sheet. The total of second, third, fourth and fifth choices are likewise recorded in this area on the score sheet (see Appendix F for example).

The total number of first choices are multiplied by 1; second choices by 2; third choices by 3; fourth choices by 4; and fifth choices by 5. These figures are added to denote the attitude toward the disabled/ handicapped score for the student.

The possible range of scores is from 27 (being the most favorable attitude) to 81 (the most unfavorable attitude). The score of 54 is considered as the mid-point on the scale with scores numerically greater being viewed as negative, and scores numerically lower than 54 as representing positive attitudes.

Design and Statistical Analysis

The first analytic paradigm presented (see Figure 1 for details) is relevant to testing null hypotheses 1 and 2 where the differences in attitudes toward the handicapped between the Teachers with Mainstreaming Experience (X1) are compared with the Teachers without Mainstreaming Experience (X2) through a comparative analysis of total scores on the Classroom Integration Inventory. The second analytic

paradigm (see Figure 1 for details) compares the differences in the performance (total scores) on the Classroom Integration Inventory of the Teachers with inservice/special education training (X1), with the Teachers without inservice/special education training (X2). The third analytic paradigm (see Figure 2 for details) compares the difference in the performance of the students on the Skill Attainment List across the groups XI (Mainstreamed, Project Change Treatment, X2 (Mainstreamed, No Treatment), X3 (Non-Mainstreamed, Project Change Treatment), and X4 (Non-Mainstreamed, No Treatment). The fourth analytic paradigm (see Figure 3 for details) presented is relevant to the testing of null hypotheses 4, 5 and 6 where the differences in the Children's Picture Sociometric Attitude Scale scores are compared for both grade levels (third and seventh) and gender (boy or girl), and the presence (X1 and X3) or absence (X2 and X4) of Treatment (Project Change).

Table 1 presents a list of the instruments to be used in the present study along with the associated constructs being assessed.

Table 1

Psychometrics

Test	Constructs Assessed
Classroom Integration Inventory --Teachers	Social Distance--Attitudes toward Handicapped
Skill Attainment List--Project Change--Students	Knowledge of Handicaps
Attitude Survey--Project Change--Students	Attitudes toward Handicapped
Children's Picture Sociometric Attitude Scale--Students	Social Distance--Attitudes toward Handicapped

Figure 1

Analytic Paradigm Related to Testing Null Hypotheses I and II

X1	X2
Teachers with Mainstreaming Experience	Teachers without Mainstreaming Experience
Classroom Integration Inventory Scores	Classroom Integration Inventory Scores

X1	X2
Teachers with inservice/ special education training	Teachers without inservice/ special education training
Classroom Integration Inventory Scores	Classroom Integration Inventory Scores

Statistical Analysis: Simple Analysis of Variance

Two Group Design

Dependent Variables
CII scores
(attitude toward handicapped learner measure)

Independent Variables
Experience
Training

Figure 2

Analytic Paradigm Related to Testing Null Hypothesis III

	Mainstreamed	Non-Mainstreamed
Treatment (Project Change	Skill Attainment List Scores	Skill Attainment List Scores
No Treatment	Skill Attainment List Scores	Skill Attainment List Scores

Statistical Analysis: 2 X 2 Factorial Anova

Four Group Design

XY
XY
XY
XY

Dependent Variables
Skill Attainment
List Scores
(measure of knowledge of handicaps)

Independent Variables
Mainstreaming/No Mainstreaming
Project Change/No Project Change
Treatment

Figure 3

Analytic Paradigm Related to Testing Null Hypotheses IV, V, and VI

		Third Grade (n=40)		Seventh Grade (n=40)	
		Main-streamed	Non-Main-streamed	Main-streamed	Non-Main-streamed
Treatment (Project Change)	Boys	CHILDREN'S PICTURE			
	Girls	SOCIOMETRIC			
No Treatment	Boys	ATTITUDE SCALE			
	Girls	SCORES			

Statistical Analysis: 2 X 2 X 2 X 2 Factorial Anova

Dependent Variables	Independent Variables
Children's Picture Sociometric Attitude Scale Scores (attitude toward handicaped learners measure)	Age Gender Mainstreaming/No Mainstreaming Project Change Treatment/ No Project Change Treatment

CHAPTER IV

RESULTS

Results Related to Testing Null Hypotheses I and II

The previously stated null hypotheses relating to the teachers' previous experience with the handicapped learner and/or special education course work will be reviewed. An examination of the teachers' attitudes will be conducted relative to the Classroom Integration Inventory Scores.

A preliminary examination of the intercorrelations among the selected variables of previous contact or experience with the handicapped learner, special education hours earned or inservice training and the Classroom Integration Inventory total score revealed that previous experience and special education course training were significantly related to overall CII scores. A 2 x 2 factorial analysis of variance was conducted by partitioning the two variables of previous experience with the handicapped (previous experience versus inexperience) and special education course hours (none versus one or more) where differences in attitudes toward the handicapped learner served as the dependent variable. Table 2 presents the mean scores on the overall CII along with their respective standard deviations. A summary of the results of the analysis of variance of total CII scores for the groups established by virtue of special education hours taken (none versus one or more), and previous

Table 2

The Mean Performance Scores on the Classroom Integration Inventory by Previous Experience in Mainstreaming and Special Education Hours

Total CII	$\bar{x}$	189.3	Teachers Previously Experienced in Mainstreaming (32)		Teachers Previously Inexperienced in Mainstreaming (14)	181.3
	S.D	17.9				18.6
			No Special Education Courses (22)	Special Education Courses (10)	No Special Education Courses (7)	Special Education Courses (7)
Total	$\bar{x}$		181.7	206.1	169.3	193.3
CII	S.D		10.3	19.9	13.9	14.8
			178.7		200.8	
			12.3		18.7	

experience with the handicapped learner (experienced versus inexperienced) is presented in Table 3.

Total CII scores were found to be related to teachers' previous experience with the handicapped learner. The main effect produced an F (1, 42) = 7.46 p .0092. Reference to Table 2 reveals that the previously experienced teachers expressed favorable attitudes toward handicapped learners. Their mean total CII score was 189.3 with a standard deviation of 17.9, while those without experience with the handicapped produced a mean score of 181.3 with a standard deviation of 18.6. The participation of teachers in special education courses work was found to be directly related to the attitudes toward the handicapped learner F (1, 42) = 27.53 p .001. Teachers who reported special education coursework expressed the most favorable attitudes toward the handicapped learner. Their mean total CII score was 200.8 with a standard deviation of 18.7 while those without special education coursework earned a mean score of 178.7 with a standard deviation of 12.3. Although no significant interaction was found to be present between special education training and previous experience with the handicapped learner, it should be noted that in all cases those who have taken special education courses achieved higher attitude scores as measured by the CII than those who had not taken special education courses.

Therefore, given that which is reported above, null hypotheses I and II were rejected. These findings indicated a significant main effect for experience with handicapped learners and training in special education on the part of the teacher participants. That is to

Table 3

Analysis of Variance for the Full-Scale CII

Source of Variation	DFS	Sum of Squares	Mean Squares	F Ratio
Previous Experience	1	1474.04	1474.04	7.46**
Special Education Hours	1	5437.12	5437.12	27.53**
Previous Experience X Special Education Honors	1	.40	.40	0.00
Within Groups	42	8294.52	197.48	
Total	45	15037.21		

** = p .01

say that teachers appeared to relate more positively to the handicapped learners after exposure to them.

Results Related to Testing Null Nypothesis III

The previously stated null hypothesis relating to the regular education students' measured skill levels relative to knowledge of handicaps and handicapping conditions will be reviewed relative to the Skill Attainment List scores.

An examination of the correlations between the selected variables of some experience or contact with the handicapped learner, exposure to the Project Change Treatment condition and the Skills Test total score revealed that previous experience and the Project Change Treatment condition were significantly related to the overall Skills Test scores. An analysis of covariance, utilizing the Skills pretest as a covariate was performed. Results indicated that total Skill Attainment List scores were directly related to students' experience with handicapped learners and/or their exposure to the Project Change treatment condition. The two variable partitions of levels of experience with the handicapped learner and exposure versus nonexposure to the Project Change Treatment condition were analyzed in terms of their main or direct contributions to the differences in acquired skill levels pertaining to knowledge of handicaps and handicapping conditions. Table 4 presents the mean pre-test scores on the Skills Test along with their respective standard deviations. The test of equality of means which was run for the Skills pre-test revealed no significant differences in means on the pre-test measures. Table 5 presents the mean post-test scores on the Skills Test along

Table 4

The Mean Performance Pre-Test Scores on the Skills Test
by Previous Experience and Project Change Treatment

Total Skills $\bar{x}$ 13.35 S.D 3.03		Students Exposed to Mainstreaming (40)		Total Skills $\bar{x}$ 13.77 S.D 3.14 Students Not Exposed to Mainstreaming (40)	
		No Project Change Treatment (20)	Project Change (20)	No Project Change Treatment (20)	Project Change (20)
Total	$\bar{x}$	13.55	13.15	13.35	14.20
Skills Test	S.D	3.76	2.16	3.31	2.98
Project Change				13.67 2.63	
No Project Change		13.45 3.50			

Table 5

The Mean Performance Post-Test Scores on the Skills Test
by Previous Experience and Project Change Treatment

Total Skills $\bar{x}$ 17.50 S.D 3.80		Students Exposed to Mainstreaming (40)		Total Skills $\bar{x}$ 15.63 S.D 4.66 Students Not Exposed to Mainstreaming (40)	
		No Project Change Treatment (20)	Project Change (20)	No Project Change Treatment (20)	Project Change (20)
Total	$\bar{x}$	16.15	18.85	12.95	18.30
Skills Test	S.D	3.76	3.42	3.97	3.70
Project Change				18.57 3.53	
No Project Change		14.55 4.14			

with their respective standard deviations. A summary of the results of the analysis of covariance of the total Skills Test scores for the groups established by virtue of exposure or nonexposure to the Project Change Treatment condition, and experience or inexperience with handicapped learners is presented in Table 6.

Total Skills Test scores were found to be related to students' experience with handicapped learners through exposure to mainstreaming within their classrooms. The main effect produced an F (1, 75) = 33.54, p .0001. Reference to Table 5 reveals that students previously experienced with mainstreaming through exposure to handicapped learners within their classrooms displayed more knowledge of handicaps and handicapping conditions. Their mean total Skills Test score was 17.50 with a standard deviation of 3.80, while those without this exposure to the handicapped produced a mean score of 15.63 with a standard deviation of 4.66. The participation of the students in the Project Change Treatment condition was also found to be directly related to acquisition of knowledge relative to handicaps and handicapping conditions (F (1, 75) = 89.68, p .0001). Those students who were involved in the Project Change Treatment condition displayed more knowledge of handicapping conditions. Their mean total Skills Test score was 18.57 with a standard deviation of 3.53 while those without the Project Change Treatment condition earned a mean score of 14.55 with a standard deviation of 4.14. No significant interaction was found to be present between the Project Change Treatment condition and the previous exposure to mainstreaming the handicapped learner.

Therefore, given that which is reported above, null hypothesis

Table 6

Analysis of Covariance for the Skills Test Students

Source of Variation	DFS	Sum of Squares	Mean Squares	F Ratio
Previous Experience	1	107.23	107.23	33.54**
Project Change Treatment	1	286.70	286.70	89.68**
Previous Experience X Project Change Treatment	1	8.85	8.85	2.77
Pretest-Skills	1	810.48	810.48	253.52
Within Groups	75	239.76	3.19	
Total	79	1479.68		

** = p .01

III was rejected. The findings indicated significant increased knowledge of handicaps and handicapping conditions for both the Project Change Treatment student participants, and those students who were exposed to handicapped learners within their classrooms.

Results Related to Testing Null Hypotheses IV, V, and VI

The previously stated null hypotheses relating to the attitudes of the regular education students experience with handicapped learners and/or exposure to the Project Change treatment condition will be reviewed. An examination of the students' attitudes will be conducted relative to the Children's Picture Sociometric Attitude Scale.

An examination of the intercorrelations among the selected variables of nonexposure to handicapped learners on the part of the students, who either participated or did not participate in the Project Change treatment condition, revealed that the involvement in the treatment condition was significantly related to the student's attitude toward the handicapped learner as expressed on the Children's Picture Sociometric Attitude Scale. The two variables of nonexposure to handicapped learners on the part of the students and the Project Change treatment condition (exposure or nonexposure) were analyzed in light of their main contributions to the differences in attitudes expressed toward the handicapped learner as reflected on their overall score on the Children's Picture Sociometric Attitude Scale (CPSAS). Table 7 presents the mean scores on the overall CPSAS along with their respective standard deviations. A summary of the results of the analysis of variance of the total CPSAS scores for the groups established by virtue of age, Project Change treatment condition,

Table 7

The Mean Performance Scores on the Children's Picture Sociometric Attitude Scale by Exposure to Handicapped Learners and Project Change Treatment Condition

		Students Exposed to Handicapped Learners (40)		Students Not Exposed to Handicapped Learners (40)	
Total CPSAS	$\bar{x}$	43.38		46.32	
	S.D	11.78		12.14	
		No Project Change (20)	Project Change (20)	No Project Change (20)	Project Change (20)
Total CPSAS	$\bar{x}$	45.90	40.85	50.60	42.05
	S.D	10.31	12.85	11.18	11.78
Total CPSAS Project Change				41.45	
				12.18	
Total CPSAS No Project Change			48.25		
			10.88		

exposure to handicapped learners, and the interactions involved with the Project Change treatment condition with gender, age and exposure to handicapped learners is presented in Table 8.

Total CPSAS scores were found to be significantly related to the age of the students at the time of assessment. The main effect produced an F (1, 65) = 1157.96, p .0001. Reference to Table 9 reveals that third grade students, both male and female, expressed more favorable attitudes toward handicapped learners than did their seventh grade counterparts. Their mean CPSAS score was 35.00 with a standard deviation of 8.10, while the students at the seventh grade level produced a mean score of 54.70 with a standard deviation of 5.10. Since the lower score reflects the most positive attitude on the CPSAS, it is clear that there is a significant difference displayed by age or grade level. The participation of students in the Project Change treatment condition was found to be directly related to the attitudes toward the handicapped learner as measured by the CPSAS (F (1, 64) = 292.90, p .0001). Those students who participated in the Project Change Treatment condition expressed the more favorable attitudes toward the handicapped learner. Their mean total CPSAS score was 41.45 with a standard deviation of 12.18 while those without this exposure to the treatment condition earned a mean score of 48.25 with a standard deviation of 12.3. Total CPSAS scores were found to be related to students exposure to handicapped learners within their classrooms. This main effect produced an F (1, 64) = 98.45, p .0001. Reference to Table 7 illustrates that those students who had been exposed to handicapped learners through mainstreaming within their

Table 8

Analysis of Variance for the Children's Picture Sociometric Attitude Scale

R-Square
0.960939

Source of Variation	DFS	Sum of Squares	Mean Squares	F Ratio
Age	1	3264.01	3264.01	1157.96**
Treatment	1	825.61	825.61	292.90**
Exposure to Handicapped Learners	1	277.51	277.51	98.45**
Gender X Project Change Treatment	1	12.01	12.01	4.26*
Age X Project Change Treatment	1	19.01	19.01	6.75*
Project Change Treatment X Exposure to Handicapped Learners	1	15.31	15.31	5.43*

* = p .05
** = p .0001

Table 8 (continued)

Source of Variation	DFS	Sum of Squares	Mean Squares	F Ratio
Sex	1	.11	.11	.04
Sex X Age	1	.61	.61	.22
Sex X Exposure to Handicapped	1	1.01	1.01	.36
Age X Exposure to Handicapped	1	6.61	6.61	2.35
Sex X Age X Project Change	1	2.11	2.11	.75
Sex X Age X Exposure to Handicapped	1	2.81	2.81	1.00
Age X Project Change X Exposure to Handicapped	1	6.61	6.61	2.35
Sex X Age X Project Change X Exposure to Handicapped	2	4.62	2.31	.82
Within Group	64	180.40	2.81	
Total	79	4618.38		

Table 9

The Mean Performance Scores on the Children's Picture Sociometric Attitude Scale by Grade Level and Gender

		Third Grade Students (40)		Seventh Grade Students (40)	
		Male (20)	Female (20)	Male (20)	Female (20)
Total CPSAS	$\bar{x}$	35.70	34.30	55.10	54.30
	S.D	8.84	7.43	5.04	5.26
	$\bar{x}$	35.00		54.70	
	S.D	8.10		5.10	

classrooms expressed more favorable attitudes toward the handicapped learner as measured by the CPSAS. Their mean total CPSAS score was 43.38 with a standard deviation of 11.78, while those without comparable experience with handicapped learners within their classrooms produced a mean score of 46.32 with a standard deviation of 12.14. Table 8 presents the findings for the significant interaction that was found to be present between gender and Project Change treatment condition (F (1, 64) = 4.26, p .04). A graphic depiction of that interaction is presented in Figure 4. Further reference to Table 8 indicates that an interaction is evident between age (represented by grade levels three and seven) and Project Change treatment condition (F (1, 64) = 6.75, p .01). Figure 5 provides an illustration of this interaction. Final reference to Table 8 also indicates that the exposure of students to handicapped learners within their classrooms and participation in the Project Change treatment condition resulted in an interaction (as depicted in Figure 6) which is shown to have a significant result (F (1, 64) = 5.43, p .02). Since these interactions are ordinal the inferences relative to the differences in the main effects are not confounded.

Highly significant negative correlations were obtained when the Project Change Attitude measures were analyzed in relation to the Children's Picture Sociometric Attitude scale scores. Since a positive attitude is represented by an increase in score on the Project Change Attitude measure, while a decrease in score represents an increase in positive attitudes on the Children's Picture Sociometric Attitude Scale, these findings are consistent with

Figure 4

Interaction of Gender and Project Change Treatment Condition on the Children's Picture Sociometric Attitude Scale

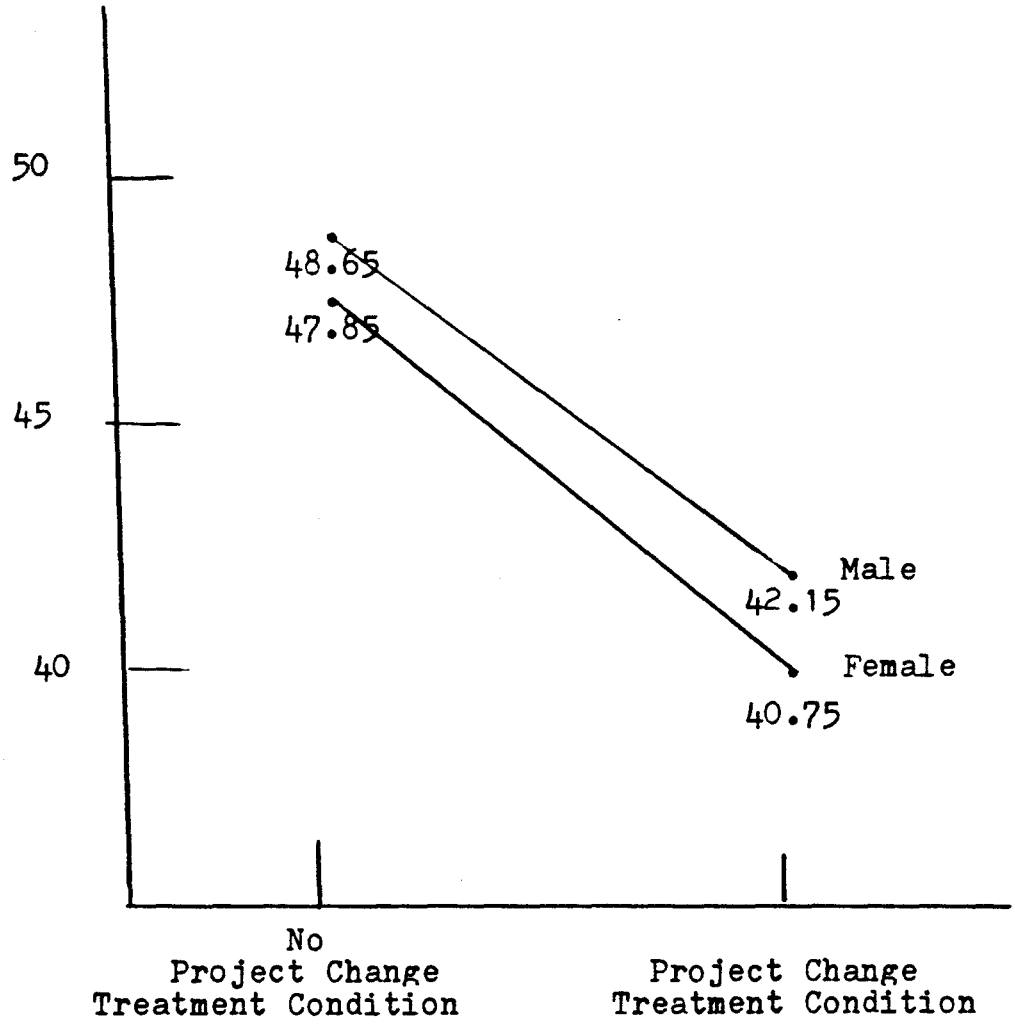


Figure 5

Interaction of Age and Project Change Treatment on the Children's Picture Sociometric Attitude Scale

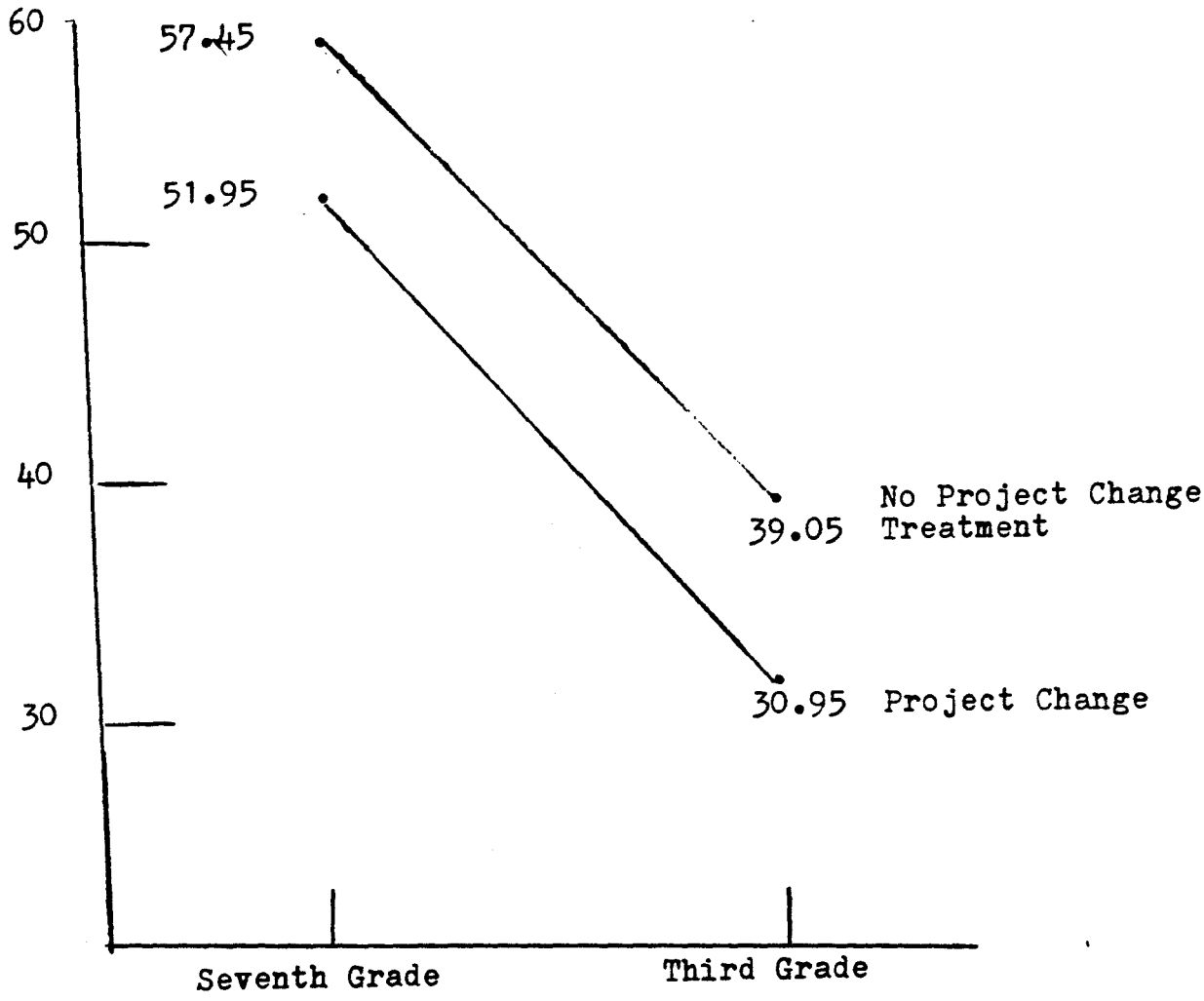
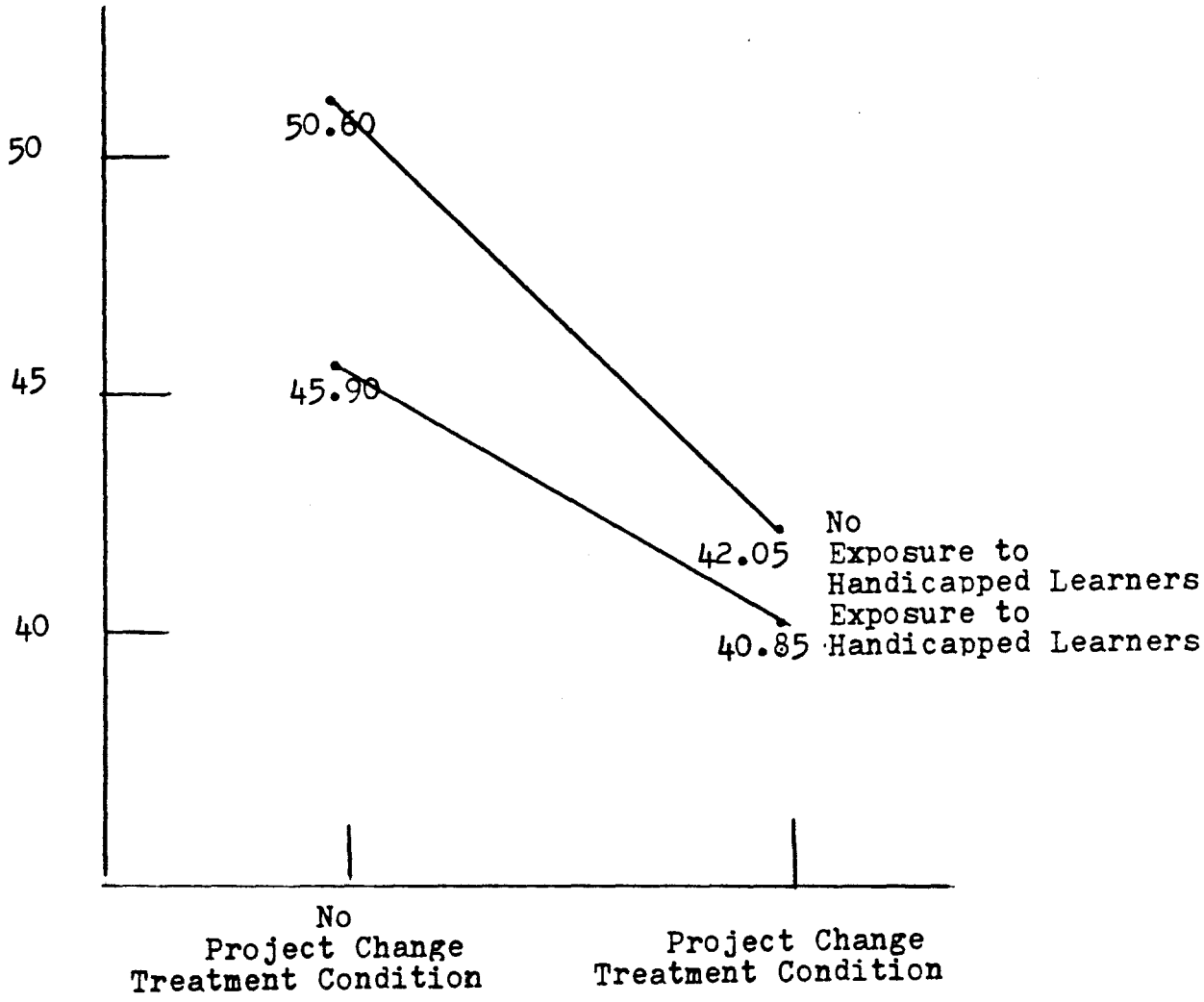


Figure 6

Interaction of Experience with Handicapped Learners and Project Change Treatment Condition on the CPSAS



expectations. A summary of these correlations are presented in Table 10.

Therefore, given that which is reported above, null hypotheses IV, V, and VI were rejected. Results indicated significant main effects for age, treatment, exposure to handicapped learners, in addition to interactions involving gender and treatment, age and treatment, and treatment with exposure.

Summary of Results

H_1: The relationship between previous experience with handicapped learners and the positive attitudes expressed toward mainstreaming the handicapped learner was established for our teaching population. Those teachers with previous experience with handicapped learners scored higher attitude scores than those who did not have this type of experience. Therefore, null hypothesis I was rejected.

H_2: The relationship between special education course work and positive attitudes toward the handicapped learner was confirmed for our teacher sample. Those teachers who reported having completed special education course work scored significantly higher attitude scores than those who reported no such course work. Therefore, null hypothesis II was rejected.

H_3: A statistically significant difference was found on the scores of the Skill Attainment measure between those groups who participated in the Project Change treatment condition and those who did not participate in the Project Change treatment condition. Therefore, null hypothesis III was rejected.

H_4: A significant relationship was found between the favorable

Table 10

Correlation Coefficients of the Project Change Attitude Measures and the Children's Picture Sociometric Attitude Scale

	Male (40)	Female (40)	All Students (80)
Pretests	r = -.865	r = -.942	r = -.892
Posttests	r = -.855	r = -.902	r = -.897

attitude scores obtained by students who participated in the Project Change treatment condition. Those students who did not participate in the treatment condition expressed more negative attitude scores with consistency. Therefore, null hypothesis IV was rejected.

H_5: Those students who were exposed to handicapped learners within their classrooms, while not participating in the Project Change treatment condition, displayed a statistically significant gain in positive attitudes toward the handicapped learner when compared with a comparable group who were not exposed to handicapped learners within their classrooms or the Project Change treatment condition. Therefore, null hypothesis V was rejected.

H_6: Significantly more positive attitudes were expressed by the third grade students when compared with the seventh grade population. Although the female students at both grade levels expressed more positive attitudes than the males, these results were not found to be statistically significant. Based on these findings, null hypothesis VI was rejected.

In general it can be stated that, based on the findings of the present investigation, significantly more positive attitudes toward handicapped learners were expressed by those who have had experience or contact with handicapped learners, and/or have participated in training courses designed to increase their knowledge of handicapping conditions. Furthermore, third grade students expressed more positive attitudes than seventh grade students, with the female students expressing more positive attitudes than their male counterparts.

CHAPTER V

DISCUSSION

The present investigation produced a number of interesting findings. Not surprisingly, exposure to special education training or course work demonstrated a consistent relationship with those attitudes expressed by the participating teachers. A comparison of special education training and the relationship to attitudes, while taking into account previous experience or inexperience with handicapped learners, produced outcomes worthy of particular attention.

Consistent with the theory of cognitive dissonance, those teachers who reported previous experience with the handicapped displayed more positive attitudes than those who did not report this type of previous experience. A large number (22) of those teachers who reported having previous experience, but no special education training, were found to express more positive attitudes toward the handicapped learners than their inexperienced counterparts. With the sample of teacher respondents reported here, it appears that experience with handicapped learners resulted in the development of positive attitudes that were statistically significant when compared with the inexperienced sample. Consistent with the theory of cognitive dissonance the behavior of experience with handicapped learners may have lead to the observed positive attitudes. If it is true, as a number of studies indicated, that many regular educators

are strongly opposed to the concept of mainstreaming the handicapped learner into the regular classroom setting, while at the same time these same educators profess to be philosophically committed to the public educational system and each child's right to avail themselves of the educational system to the maximum extent possible, the resultant "dissonance" can be understood. The experience of mainstreaming the handicapped learner, when viewed in isolation, appears to have resulted in a reduction of that dissonant state thereby increasing positive attitudes toward the handicapped learner.

An in-depth analysis of the data collected on the students who participated in the investigation revealed that those students who participated in the Project Change treatment condition demonstrated an increased knowledge of handicaps when compared with those students who did not participate in the treatment condition. This finding was expected; however, it is of particular interest to note that those students who were exposed to mainstreaming, but did not participate in the Project Change treatment condition, displayed a significantly greater knowledge of handicaps when compared to that population of students who were exposed to neither handicapped learners or the treatment condition. It would appear that contact (i.e., the classroom educational and social interaction), resulted in a natural interest and increased knowledge of handicaps and handicapping conditions.

Those students who were participants in the Project Change treatment condition, whether exposed to handicapped learners in their classrooms or not, displayed the most consistent positive attitudes

when evaluated on the Children's Picture Sociometric Attitude Scale. These findings support the notion that increased cognitive knowledge results in understanding that in turn reduces the dissonant state generated by the presence of the handicapped child, thus resulting in increases in positive attitudes. Once again, as in the case of the Skill Attainment List findings, the structured educational and social interaction that was possible through exposure to handicapped learners within their classrooms resulted in significantly more positive attitudes for those students who were exposed, but did not participate in the Project Change treatment condition. The contact variable, as in the case of the teaching population, directly influenced the formation of positive attitudes toward the handicapped learner (dissonance reduction).

An analysis comparing the students on the basis of age or grade level revealed that the third grade children possessed more favorable attitudes, at a highly significant level, than the seventh grade students. Third grade students were more influenced to positive attitude gains when exposed to the 'Project Change' treatment condition than the seventh grade students. These findings could be interpreted to indicate that although the advanced age of the students at the seventh grade level would assume greater knowledge, either through experience or instruction, it appears that other factors are influencing the formation of less positive attitudes. It is possible that social pressures exhibited at this adolescent age level could result in less accepting attitudes toward the handicapped learner. This point is further illustrated by the regression in mean score that

observed to take place at the seventh grade level in the class which neither participated in the Project Change treatment condition nor was exposed to handicapped learners. Their third grade counterparts displayed small increases in mean scores, on all measures utilized, suggesting that less social pressure is exhibited at this age level. The egocentric adolescent at the seventh grade level may be more threatened with the concept of physical limitations, while at the same time being more easily influenced by peer social pressure in their decisions. Students at this beginning adolescent stage of development have, as a major goal, acceptance by their fellow students; thus, they try to look and dress according to the norm. The female student's decisions may be influenced by the feelings that these factors engender. The adolescent male may be more influenced by the importance of physical capability and may find it particularly frightening to be confronted with a person who lacks control of his or her body. The possibility of losing some physical capability that is taken for granted may cause the student to want to shut out any individual who displays physical dependency. The students at the third grade level, on the other hand, may be reflecting attitudes that are more subject to the influence of their parents or society as a whole, and may tend to behave in a more democratic manner as a result of the influence of the teaching of the schools. Children in the higher elementary grades may be more influenced by their peers as they begin the stage of development where independence from parents is characteristic.

Female subjects expressed more positive attitudes than male

subjects toward the handicapped learner. Female students exposed to the Project Change treatment condition displayed the most positive attitudes at both grade levels. The acknowledged gaps in male and female developmental rate could account for these differences in scores. In addition, the male subjects may have based their selections on physical ability for participation in the various social situations that were presented on the CPSAS; while the female subjects may have placed less importance on this dimension. It is generally accepted that female students mature more rapidly than their male counterparts, in this case displaying more accepting attitudes with consistency.

In summary, based on the findings of the present investigation, it can be stated that significantly more positive attitudes toward handicapped learners were expressed by those who have had experience or contact with handicapped learners, and/or participated in training courses designed to increase their knowledge of handicapping conditions. These findings were found to relate positively to positive attitudes toward the handicapped learner for both teacher and student participants. Furthermore, third grade student participants expressed more positive attitudes toward the handicapped than their seventh grade counterparts, with the female students expressing more positive attitudes than the male students at both grade levels.

Suggestions for Further Research

1. Further research using a larger sample of regular education teachers would be beneficial in determining how scores on the overall CII are correlated with special education training, and previous

experience with the handicapped learner.

2. Further research using a larger sample would be helpful in obtaining the number of comparable respondent groups needed to examine the attitudes of teachers in a given community (rural, city, etc.) in relation to the attitudes of regular education teachers in other communities.

3. Continuing research is indicated in the area of special education course work and inservice as they relate to the development of attitudes toward handicapped learners. The focus of these studies should be upon those teachers who are experienced in mainstreaming and yet have no training in the area of special education. Since a significant positive effect was found for those who reported training in the area of special education, this research should include an analysis of the types of courses and the topics of inservice that were found to have the most beneficial effect on attitudes. Results could be utilized in order to modify existing teacher training programs.

4. The sample of students upon which the testing was completed was limited to a suburban, middle-class community. A larger sample from a wider geographical area could be studied in order to investigate more fully the differences of attitudes toward handicapped learners at all grade levels.

5. Other measures could be developed to administer to the student subjects. For the purpose of this study, the social situations on the CPSAS were projected to be similar to their actual behaviors in real life situations. If observations of the children could be made by a trained observer in actual social situations in

which handicapped learners were participating, a more reliable assessment of the attitudes of the students might be made.

6. Changes in attitudes of the same child as he or she progressed through the grades might be studied by means of a longitudinal study. These findings might not be consistent with the findings of the present investigation.

CHAPTER VI

SUMMARY

It has been determined by many investigators that regular education teachers' and students' attitudes are closely tied to the effectiveness of education of the handicapped learner. In the present study, it was assumed that if mainstreaming, as mandated by Public Law 94-142, is to succeed regular education teachers and students should develop positive attitudes toward handicapped learners. In the past, research findings have shown that regular education teachers have generally displayed negative attitudes toward the mainstreaming of handicapped learners into their classrooms. Regular education students have also been found to reflect negative attitudes toward their handicapped classmates.

The teacher sample consisted of two school sites which had special education programs including handicapped learners in self-contained special education programs. An additional school which did not have any self-contained special programs for a period of 11 years was also included in the study. The Classroom Integration Inventory and a demographic information form were administered to the 46 teacher participants.

In addition, 80 student subjects were selected for involvement in the investigation at the third and seventh grade level. The student subjects were matched on gender, socio-economic level, intelligence,

exposure or nonexposure to handicapped learners within their classrooms (mainstreaming), and the participation or non-participation in the Project Change treatment condition. The Skill Attainment Lists and Attitude measures developed to assess the Project Change treatment condition at both grade levels, and the Children's Picture Sociometric Attitude Scale were administered to the student respondents.

The results indicated that there was a relationship between a favorable attitude toward handicapped learners and their previous experience with the handicapped (mainstreaming). This result was statistically significant. Those teachers who reported no previous experience with handicapped learners scored significantly lower than teachers who reported such experience. The relationship between a favorable attitude toward handicapped learners and the taking of special education course work was confirmed. Teachers who reported special education course work expressed more favorable attitudes toward the handicapped learner than those who had not taken special education courses. The relationship between increased knowledge of the handicapped and exposure to the Project Change treatment condition was confirmed for our student population. The relationship between increased knowledge of the handicapped and exposure to handicapped learners within their classrooms (mainstreaming) was also confirmed for our student population. These results were found to be highly significant. Those students who were exposed to handicapped learners displayed more positive attitudes, while those who participated in the Project Change treatment condition displayed the most positive attitudes toward the handicapped learner.

Findings also indicated that the relationship between a favorable attitude toward the handicapped learner and the participation in the Project Change treatment condition was confirmed for our student population. That is to say that those students who were exposed to the Project Change treatment condition scored significantly higher attitude scores than those who were not exposed to the Project Change treatment condition. Furthermore, the relationship between a favorable attitude toward the handicapped learner and the exposure to handicapped learners within their classroom (mainstreaming) was confirmed for our student population. A significant increase in positive attitudes was found in the group that was exposed to handicapped classmates, when compared to the group that was not exposed to such classmates. Finally, the relationship between favorable attitudes toward handicapped learners and age or grade level was confirmed for our student population. This result was found to be statistically significant. Third grade students were found to possess significantly more positive attitudes toward handicapped learners than seventh grade students. Female students at both grade levels displayed more positive attitudes than their male classmates. Third grade students were more influenced to positive attitude gains when exposed to the Project Change treatment condition than the seventh grade students. Those students who were both exposed to handicapped learners within their classrooms (mainstreaming) and participated in the Project Change treatment condition displayed the most positive attitudes of the student population.

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APPENDIX A

LISTING OF SCHOOLS

Chippewa School	16 Teachers
Navago Heights School	14 Teachers
Independence Junior High School	16 Teachers

APPENDIX B

CLASSROOM INTEGRATION INVENTORY

by
Norris G. Haring
George G. Stern
William M. Cruickshank
(1978)

Teachers are ordinarily faced with a wide variety of problems arising from the many different kinds of students they work with each day. On the following pages you will find brief descriptions of the behavior of a number of exceptional children. In each case you are to indicate how you would prefer to handle the situation if the decision were entirely up to you.

DIRECTIONS: Read each item and mark the appropriate letter in the space to the left of each item as follows:

A If you feel you could handle such a student in your regular classroom without any fundamental change in your present procedures.

B If you feel you could handle such a student in your regular classroom provided advice from a specialist or consultant was occasionally made available to you whenever you felt a need for such aid in dealing with some particular problem.

C If you feel you could handle such a student in your regular classroom provided there was a full-time specialist available at your school who could provide supplementary training for the student and frequent consultation with you.

D If you feel that such a student would benefit most by being assigned to a special class or school.

E If you feel that such a child cannot be handled probably within the context of regular or special public education.

A Regular Classroom
B Part-Time Aid
C Full-Time Aid
D Special Class/School
E Not for Public Education

..... 1. Alfred is defiant and stubborn, likely to argue with the teacher, be willfully disobedient, and otherwise interfere with normal classroom discipline.

..... 2. Barbara wears thick glasses, and her eye-balls jerk spasmodically from side to side; she can't see the blackboard very well, and reads poorly.

..... 3. Chuck can get about only in a wheelchair; someone must move it for him, or carry him in their arms, because he is unable to control any of his limbs.

..... 4. Donald is six years old and does not speak very much: what he does say is indistinct and childish, with many missing or incorrect sounds.

..... 5. Earl is eight and wears cowboy boots to class because he hasn't learned to tie his own shoelaces: he is generally cheerful and well-behaved, but talks very little and is incapable of following any but the most simple instructions.

..... 6. Florence is immature and oversensitive, likely to burst into tears at the slightest provocation.

..... 7. When Alice wears her hearing aide she hears as well as any other youngster: her voice sounds flat and hollow, and is somewhat unpleasant to hear.

..... 8. Suzy frequently gets so excited she loses control of herself and wets the floor.

..... 9. Ruth is very much like other eleven-year-olds is most respects but occasionally, during the day, a rhythmical quiver will pass over her face and she becomes totally ablivious for a few seconds.

..... 10. Roger's face was severely disfigured in an auto accident: although he is completely recovered physically, the surgeons do not expect to be able to make his appearance more acceptable for many years.

..... 11. Alan wears a leg brace and walks with the aide of crutches: he gets along quite well by himself though, and ordinarily needs no help from anyone.

..... 12. Bernard is a bully, given to teasing other children and provoking fights with them.

..... 13. Cora is supposed to have a hearing loss, but she seems to hear all right when she sits at the right end of the front row of seats.

..... 14. Debby cannot use bathroom facilities unless someone is there to help her: she is perfectly capable of making her needs known in ample time to avoid accidents.

..... 15. Clara has a noticeable scar on her upper lip: her speech seems to be coming through her nose, and she is hard to understand.

..... 16. Dotty is eight: she has difficulty following the class, and doesn't seem able to learn to read at all.

..... 17. Eight-year-old Edward sucks his thumb all the time: apparently indifferent to the reactions of parents, teachers, or other children.

..... 18. Every few weeks, without any warning, Stella will have a violent physical convulsion during which she may bite her tongue or lose control of her sphincters: after several minutes she returns to consciousness with a severe headache, nausea, and acute feelings of depression.

..... 19. Sylvia's height is grotesque: she towers over every other child in elementary school and wears adult-size clothes.

..... 20. Flora has neither bladder nor bowel control and must be taken to the bathroom at frequent intervals.

..... 21. David squints through his eye-glasses , even when he sits at the front of the room, and cannot read the blackboard or his book quite as rapidly as many of the other children.

..... 22. Occasionally Edward will repeat a sound two or three times before he seems able to go on: he speaks when called on, but does not volunteer much.

..... 23. Chuck doesn't seem to catch on to things as quickly as most, and needs to have things explained over and over again: eventually, though, he appears to learn everything the others do even though it has taken longer.

..... 24. Doris is slow, absent-minded, and a daydreamer: she seems unusually quiet and withdrawn, avoids others, and is inhibited and restrained in her behavior.

..... 25. Every hour or so Henry stares upwards at the ceiling for several seconds and loses consciousness: he has been like this for several years but is otherwise developing normally.

..... 26. Fred can feel the vibrations of loud music from a radio or phonograph, knows when a door has been slammed, but does not hear speech unless it is shouted.

..... 27. Greg tires easily and needs frequent opportunities to rest: excessive stimulation or excitement must also be avoided.

..... 28. Harold is a capable student but has a physical defect which appears to evoke laughter, ridicule, avoidance and rejection from the other children.

..... 29. Irv is sexually precocious: masturbates in class, uses obscene language, and has made advances to several girls in his class.

..... 30. Jane can tell the direction from which the sunshine enters her classroom: she cannot read the letters in an ordinary book.

..... 31. Albert does not pronounce all of his speech sounds correctly, but can be understood.

..... 32. Betty is only a little over seven but she can read the fifth grade reader very well: however, her handwriting is poor and she is about average in most other things.

..... 33. Chester is deceitful, tells lies, and cheats in school and at play: he has been involved in several thefts, and is a persistent truant.

..... 34. Generally speaking, Everett can control his bladder or bowel, although he is likely to have an occasional accident.

..... 35. Jerry does perfectly good work as long as he is left alone: he becomes extremely tense and anxious, however, whenever an adult speak to him.

..... 36. Virginia rubs and blinks her eyes occasionally when reading, and seems to find it difficult to distinguish between certain letters of the alphabet.

..... 37. Andy hears most, but not everything, that is said in class even though he wears a hearing aid.

..... 38. Stan's walk is a slow shuffle: he gets along on level surfaces or moderate inclines quite well, but is unable to manage stairs at all.

..... 39. Ray has a bright purple birthmark which covers one cheek and the side of his neck.

..... 40. Several times a day Lester says he can smell bananas: usually this means that he will soon fall to the floor in a convulsion which may last for several minutes.

..... 41. Carla is a persistent talker, whisperer and notepasser.

..... 42. Bert would play songs with one finger on the piano when he was four: now, in first grade, he has begun composing little melodies to which he gives names like "Rainy Day," " Bert's Bike," or "Juice Time."

..... 43. Laura's speech is laboriously slow, tortured, jerky and indistinct: her voice is monotonous in pitch and she cannot control its intensity.

..... 44. June's eyes are crossed but she has adequate vision in either eye despite the muscle imbalance.

..... 45. Larry sulks, and sometimes gets quite noisy, whenever he loses the direct attention of the teacher.

..... 46. William can't hear anything with his left ear, but he gets along fairly well if he can sit in one row by the window, in a room on the quiet side of the building, with the class to his right.

..... 47. Ben is unable to walk and has been confined to a wheelchair: he manages this very skillfully and needs very little help.

..... 48. Les was born with a malformed left hand which is withered and misshapen up to the elbow.

..... 49. When Terry was five he was run over, losing both of his legs and genitals: he gets around quite well now but his bladder discharges into a bag which must be emptied several times a day.

..... 50. Once or twice during the year Peter has complained of a peculiar feeling in his stomach, about a minute afterwards he has lost consciousness and his body has been first rigid and then convulsed for several minutes.

..... 51. John has no difficulty on the playground or at the blackboard but he gets quite uncomfortable when he has to use his eyes at close range for any length of time.

..... 52. Hugh eventually mutilates or destroys everything that gets into his hands: his books are marked and torn, his des ink-stained and scarred, and he has even managed to crack a black-board panel.

..... 53. When anything happens to John the whole school knows it. A bump on the playground produces tears and wailing, an "A" for an exam brings on unrestrained shrieks of delight.

..... 54. Sam moves about somewhat awkwardly and his limbs are in a slight but continual tremor that becomes pronounced only when he is nervous or excited.

..... 55. Arnold is an extremely bright nine-year-old who is far ahead of the rest of the class in most subjects: he spends a good deal of his time working on a mathematical system he calls "kinestatics."

..... 56. Bill has difficulty in starting to talk, grimaces and strains, and repeats sounds on about half the words he says in class.

..... 57. Kate weighs enough for two children her age: it is almost impossible for her to squeeze into the standard desk.

..... 58. Although Melvin does not really soil himself, as the day draws on he begins to smell more and more of feces.

..... 59. A hearing aid provides no help for Harriet: she lipreads fairly well, and can hear when she is not facing the speaker if shouted at.

..... 60. Helen's right hand may sometimes begin to tremble uncontrollably: during the next few minutes the spasmodic movement spreads along her arm, shoulder, and head before it finally stops.

APPENDIX C

DEMOGRAPHIC INFORMATION

School Name:_____ Code:_____

1. Gender:
   a) Female_____ b) Male_____

2. Age:
   a) 21-24 years_____ b) 25-34 years_____ c) 35-44 years_____
   d) 45-54 years_____ e) over 54 years

3. a) Married_____ b) Single_____ c) Divorced/Separated_____
   d) Children_____ e) No Children_____

4. Professional Teaching and/or Administrative Experience (including this year):
   a) 1 year_____ b) 2-5 years_____ c) 6-10 years
   d) Over 10 years_____

5. Educational Training:
   a) B.A._____ b) B.A. +15_____ c) M.A._____ d) M.A. +15_____
   e) M.A. +30, Ph.D. or Ed.D._____

6. Present Position:
   a) K-3_____ b) 4-6_____ c) 7-8_____ d) Special Area (Art, Music, P.E._____

7. Semester Hours Completed in Special Education Courses:
   a) 0_____ b) 1-6_____ c) 7-12_____ d) 13-18_____ e) 19+_____

8. Inservice in Special Education (Estimated Clock Hours):
   a) 0 hours_____ b) 1-24 hours c) 25-49 hours_____
   d) 50-100 hours_____

9. Have you had previous experience in mainstreaming handicapped students?
   a) yes_____ b) no_____

10. Teachers Only: Do you now teach special education students who are mainstreamed into one or more of your classes?
    a) yes_____ b) no_____

11. Junior High Teachers Only--Indicate Department or Subject Area:
    a) Art_____ b) Industrial Arts/Home Economics_____ c) Language Arts_____ d) Mathematics_____ e) Music_____ f) Physical Education_____ g) Science_____ h) Social Studies_____

APPENDIX D

Project Change

Program Description

Level: Primary

Grade: Third

Units: Normal Health

Senses

Acceptance of Individual Differences

Disabilities: Blindness

Deafness

Physical Handicaps

Acceptance of Handicaps

Level: Junior High

Grade: Seven

Units: Normal Health

Senses

Acceptance of Individual Differences

Disabilities: Blindness

Deafness

Physical Handicaps

Acceptance of Handicaps

TABLE A
STUDENT SKILL ATTAINMENT CHECKLISTS (K-8)
(LOCALLY DEVELOPED)

INSTRUMENT	SUBJECTS	EXAMINERS	INTERVENTION	VALIDITY	RELIABILITY	NATURE	SCOPE
Skill Attainment Checklists Individual test K-3 Group Tests Grades 4 5 6 7 8	Experimental and Control K-8 students	K-3 Project staff and trained parents 4-8 classroom teachers	Project C.H.A.M.C.E. student curriculum	Content Validity a. test items based on objectives of student curriculum per grade level b. average discrimination index per instrument ranges from 0.2 to 0.4 c. Non-project related university professors compared student unit objectives at each grade level with student curriculum to verify content validity of test instrument	Test-retest studies (one week interval) Correlations of tests per grade level range from 0.57 to 0.88 .3 - .72 .7 - .80 Standard Errors of Measurement range from 1.41 to 2.69 .3 - 1.66 .7 - 1.41	K-3 Normal Health Senses Acceptance of Individual Diff. Blindness Deafness Physical Handicaps Acceptance of Handicaps 4-6 Accept. of Self & Others Physiology of the Eye Blindness Physiology of Endocrine System Diabetes 6-5 Acceptance of Self & Others Physiology of the Ear Deafness Physiology of the Oral Mechanism Speech Impairments 6-6 Acceptance of Self & Others Physiology of the Central Nervous Sys. Epilepsy Basic Anatomy Physical Handicap 6-7 Acceptance of Self & Others Cerebral Function Mental Retardation Learning Disabilities Emotional Problems 6-8 Acceptance of Self & Others Review of Disabilities & Rehab Health Careers (Handicapped & Non-Handicapped)	Number of items per area measured 4 4 7 3 3 3 4 5 2 11 4 8 3 6 10 4 7 2 3 8 6 11 1 7 8 6 8 6 23 3

FREEDOM FROM OFFENSIVENESS

Multicultural groups used in item analysis

Readability ranges from one year below to six months above each grade level (4-8 except for medical terms

Handicapped children included in administration of tests without negative feedback from students, parents (disabled & non-disabled) or teachers

RANGE

Majority of items per grade level of moderate difficulty resulting in spread of scores

TABLE B

STUDENT ATTITUDE SURVEYS (K-8)

(LOCALLY DEVELOPED)

INSTRUMENT	SUBJECTS	EXAMINERS	INTERVENTION	RELIABILITY	VALIDITY	NATURE	SCOPE: Number of items per area measured		
							K-3	4-6	7-8
Student Attitude Surveys Individual test at primary level (K-3) Group tests at intermediate level (CA-6) and junior high level (G7-8)	Experimental and control students at each grade level (K-8)	Project staff and trained parents at primary level (K-3) Classroom teachers at intermediate (CA-6) and junior high (G7-8) levels	Project C.H.A.M.C.E. curriculum	Test-retest studies with one week interval Reliability correlations per grade level range between 0.67 to 0.86 Grade — Correlation 3 — 0.83 7 — 0.86 Standard Errors of Measurement per grade level range from 3.71 to 8.26 Grade — Standard Error (Se) 3 — 3.71 7 — 5.26	Test items based on objectives of student curriculum per education-al level (primary, intermediate, and junior high) Average discrimination index per test instrument ranges from 0.26 to 0.35 Non-project related university professors compared unit objectives at each level with curriculum to verify content validity of test instrument	Attitude towards:			
						Physical Appearance	3	3	3
						Personality	13	12	9
						Expectations	10	15	16
						Marriage & family	1	2	4
						Emotional capabilities	3	3	3

FREEDOM FROM OFFENSIVENESS	RANGE
Multicultural groups used in item analysis Readability ranges from one year below to six months above each grade level G 4-8 Handicapped children included in administration of tests without negative feedback from students, percentage (disabled & non-disabled) or teachers	Majority of items per grade level of moderate difficulty resulting in spread of scores

PROJECT C.H.A.N.G.E.
TITLE IV C ESEA
SKILL ATTAINMENT LIST
PRIMARY GRADES

Instrument description

The Skill Attainment List for Primary Grades is an individually administered test which is given by parents or volunteers. It is designed to measure knowledge of concepts presented in the Project C.H.A.N.G.E. curricula from kindergarten through third grade. The test consists of 28 questions and an oral response is required of the child. It usually takes no more than ten minutes to complete this test.

Materials

One copy of the test, two number two pencils, a Scantron card for recording responses, and a clipboard are required to complete one administration of the test.

Directions

1. Test one child at a time

2. Each child must have a chance to answer all 28 questions

3. Use the Scantron cards for scoring. Mark the A box if the child answers correctly. Mark the B box if the child gives an incorrect answer, answers incompletely, or does not answer. Use a number two pencil and fill in the boxes completely. Leave all other boxes blank.

4. The child's name and the teacher's name are to be written on the Scantron card. Write the child's name on the name line and the teacher's name on the subject line.

5. The wording to be used for each question is underlined for you. It is important that everyone ask exactly the same questions, so please do not deviate from the underlined words.

6. A question may be repeated once if you think the child has not heard you. Please do not wait more than a couple of seconds before going on to the next question if the child does not respond. It is very important that you do not prompt the child in any way.

7. Correct answers for each question and scoring criteria are listed for you under each question.

Scoring

The Primary Skill Attainment List is machine scored with the Scan Tron Test Scoring Computer. Each item marked "A" on the Scan-Tron Card is given one point credit.

PROJECT: C.H.A.N.G.E.
TITLE IV C ESEA

SKILL ATTAINMENT LIST
PRIMARY GRADES

1. Show me your: eyes, ears, nose, tongue, ankle, finger, arm, leg, hand, neck, teeth, wrist, thumb, elbow, toe, lips, heel, knee, chest, shoulders.

Mark the A Box only ------- if the child gets 16 or more out of the 20 parts correct.

2.

a. What do you see with?

Eyes

b. What do you hear with?

Ears

c. What do you feel with?

Fingers, Hands, or Skin

d. What do you smell with?

Nose

e. What do you taste with?

Mouth or tongue

---

3. On this question, the child must get at least one correct for each sense. In other words, go on to question four as soon as the child gets two wrong for any sense.

a. Which sense would tell you a stove is hot?

Touch

a. Which sense would tell you an ice cube is cold?

Touch

b. Which sense would tell you something you ate is candy?

Taste

b. Which sense would tell you something you ate is a lemon?

Taste

c. Which sense would tell you a person is wearing perfume?

Smell

c. Which sense would tell you a skunk is near?

Smell

d. Which sense would tell you the doorbell was ringing?

Hearing

d. Which sense would tell you a man was blowing a whistle?

Hearing

e. Which sense would tell you there are clouds in the sky?

Sight or vision

e. Which sense would tell you it is a sunny day?

Sight or vision

---

4. Can you name all five senses?

Sight/vision, hearing, smell, taste, touch

---

5. Tell me one rule for good health.

Enough sleep, shower or bath, brush teeth, exercise, regular visits to doctor or dentist, good grooming, and balanced meals

---

6. Tell me two other rules for good health.

Enough sleep, shower or bath, brush teeth, exercise, regular visits to doctor or dentist, good grooming, and balanced meals

---

7. What would be good to eat for dinner or supper?

Child must name one each from dairy, bread, fruits or vegetables, and meat or fish

---

8. Can you tell me three safety rules?

Look before crossing street, be careful when swimming, walk bike across street, stay away from dogs and strangers

---

9. Tell me two ways people are alike.

Physical characteristics:
eyes, ears, size
Environmental characteristics:
have families, go to school, live in home or apartment
Experience common feelings:
happy, angry, afraid

Child must name two ways or receives no credit.

---

10. How are people different?

Age, hair, size, color, fingerprints

11.

a. What kinds of feelings do you have?

Child must name any two from: anger, happiness, sadness, fear, lonliness

b. What kinds of needs do you have?

Child must name one from: food, sleep, home, friends, family, acceptance

Both parts (2 feelings, 1 need) of the question must be answered for credit.

12.

a. What kinds of feelings do other people have?

Child must name one from anger, happiness, sadness, fear, loneliness

b. What kinds of needs do other people have?

Child must name one from: food, sleep, home, friends, family, acceptance

Both parts (1 feeling, 1 need) of the question must be answered for credit.

13.

a. What are you good at?

School work, sports, any hobby

b. What is hard for you?

School work, sports, tying shoes, any chore

Both parts (2 answers) of the question must be answered for credit.

---

14. How do you feel about people who are different?

Like, dislike, afraid, any other answer either positive or negative

---

15. How would it help you to like someone who is different from you?

Getting to know about them would make me less afraid. (Knowledge removes fear)

---

16. What is a handicap?

Blind - - - can't see
Deaf - - -- can't hear
Physical- - can't walk

---

17. What is blindness?

Not being able to see

---

18. What two problems do blind people have?

Crossing street, getting lost, working, reading, writing, cooking, eating

Must name two for credit.

---

19. What two things can blind people do to help themselves?

Use braille, use a cane, use a guide dog, ask a person for help

Must name two for credit.

---

20. What is deafness?

Not being able to hear

---

21. What two problems do deaf people have?

Talking, working, driving

Must name two for credit

---

22. What two things can deaf people do to help themselves?

Reading lips, wearing a hearing aid, using sign language

Must name two for credit

---

23. What is a physical handicap?

Not being able to move or use a part of the body. Do not accept broken leg or crutches

---

24. What two problems do physically handicapped people have?

Walking, eating, or any other problem related to moving

Must name two for credit.

---

25. What two things can physically handicapped people do to help themselves?

Using a cane, ramp, wheelchair, prosthesis

Must name two for credit.

---

26. How are handicapped people just like you and me?

Same feelings, needs, physical, social, and emotional characteristics

---

27. Would you be friends with a handicapped child?

Yes

28.

a. Do all people like handicapped people?

No

b. Why don't some people like handicapped people?

They are different, look different, talk funny, can't see or move

Must answer both questions for credit.

PROJECT: C.H.A.N.G.E.
TITLE IV C - ESEA
ADMINISTRATION OF SKILL ATTAINMENT LIST

INTERMEDIATE AND JUNIOR HIGH LEVELS

Instrument Description

The Skill Attainment List is a group test which is administered to the class by the teacher. This instrument is designed to measure the concepts in terms of the curriculum objectives at each grade level.

Materials

The examiner has a copy of the Skill Attainment List for the appropriate grade level.

Students must have a score sheet and a number two (No. 2) pencil.

Score Sheet

On the score sheet, only the name is to be filled in by the student. The name goes in the appropriate space on the upper right hand side of the score form.

All answers are to be recorded on the score sheet with a No. 2 pencil. The number on the score sheet corresponds to the question number.

If the students are not familiar with this type of score sheet, please draw the following example at the board:

1. A B C D

The E box on the score sheet is not used. This is a multiple choice test with only four alternative answers.

After drawing the example at the board, read the following statements:

1. The sum is:

   a. rectangular
   b. square
   c. round
   d. oval

Let one subject go to the board and color in the appropriate space. If necessary, please repeat the demonstration until satisfied that the students understand the correspondance of the number of the question to the answer and the relationship of their letter choice.

General Instructions

Each subject is to receive a score sheet. Only the examiners will have a copy of the test questions. The examiner is to inform the subjects to respond to each question even if they are not sure of the answer.

The examiner is to tell the subjects to remember that the E box will not be used on the score sheet. This should help the students in not losing their place and filling in an inappropriate answer space.

The examiner is to tell the subjects, "I will read the questions twice. The first time just listen, the second time - please mark the box for your answer choice on your score sheet. Remind students to make their marks within the lines and to press hard so answers are legible. It is permitted for the examiner to repeat the question more than twice upon the request of a subject."

The examiner must also tell the subjects, "I cannot explain any of the question choices or terms to you. Please guess. It is important for you to answer each question."

Scoring

The intermediate and junior high level Skill Attainment Lists are machine scored with the Scan Tron Test Scoring Computer. Each correct item is given one point credit.

PROJECT: C.H.A.N.C.E.
TITLE IV C - ESEA

SKILL ATTAINMENT LIST - GRADE 7

1. A hinderance placed upon a person so that it is difficult achieving the full potential of that person's life is a definition for:

   a. handicap
   b. vocation
   c. temperament
   d. ability

2. The majority of handicapped people:

   a. were born with their disability
   b. acquired their disability from a genetic flaw
   c. became disabled during their life
   d. have problems due to heredity

3. The self concept of a person and the attitudes of their friends:

   a. does not affect the persons attitude toward the handicapped
   b. cause indifference toward disabled people
   c. forms all emotions
   d. affect the persons attitude toward handicapped people

4. Handicapped people desire to be accepted:

   a. in a special way
   b. close to the way we judge others, but with special consideration
   c. through the same way we judge others
   d. because they deserve it for the rough life they've had

5. A hazard more life threatening to blind people than to visually unimpaired people is:

   a. electricity
   b. water
   c. fire
   d. handling finances

6. A blind person is able to learn by using the reading technique known as:

   a. speed reading
   b. reading comprehension
   c. braille reading
   d. lip reading

7. An individual with a hearing impairment will try to compensate for it by being:

   a. more visually alert
   b. less willing to talk
   c. indifferent to sounds
   d. friendlier toward people

8. The instrument used test for a hearing loss is:

   a. sphygmomanometer
   b. styllus
   c. tuning fork
   d. audiometer

9. A person who has suffered the loss of a limb due to disease, injury or a failure to properly develop during the prenatal period is known as:

   a. a paraplegic
   b. an albino
   c. an amputee
   d. a quadraplegic

10. A physically handicapped individual's readiness to live life to the fullest by learning to make full use of what's available to him, means which of the following stages has been reached in the grieving process:

    a. denial
    b. acceptance
    c. bargaining
    d. depression

11. The primary rehabilitative process for physical handicaps is:

    a. hydrotherapy
    b. occupational therapy
    c. physical therapy
    d. play therapy

12. Diabetes is a dysfunction of:

    a. the pancreas gland
    b. the thyroid gland
    c. the pituitary gland
    d. the liver

13. The hormone secreted by the pancreas gland so simple sugars can be absorbed from the blood by the body's cells is known as:

    a. bile
    b. insulin
    c. growth hormone
    d. adrenalin

14. A medical specialist involved in the diagnosis and treatment of diabetes is:

    a. a physical therapist
    b. a physician
    c. a surgeon
    d. a metabolic specialist

15. An organic factor causing defective speech is:

    a. a cleft palate
    b. unpleasant sounds
    c. home environment
    d. tongue position

16. A distortion in speech is classified as:

    a. cleft palate
    b. aphasia
    c. articulation disorder
    d. retarded speech development

17. Speech not developed according to age level, or only a partial understanding of language or vocal expression is known as:

    a. an articulatory disorder
    b. stuttering
    c. vocal disorder
    d. delayed speech

18. When speech rhythm is out of control it is known as:

    a. stuttering
    b. vocal disorder
    c. an articulatory disorder
    d. aphasia

19. A disturbance in the brain's electrochemical activity resulting in convulsive movements of the body is known as:

    a. mental retardation
    b. cerebral palsy
    c. epilepsy
    d. physical handicap

20. The convulsive movements of the body resulting from the electrical disturbance in the brain is know as:

    a. a coma
    b. a seizure
    c. stuttering
    d. aphasia

21. Exhibiting a disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language defines the handicap known as:

    a. speech impairments
    b. learning disabilities
    c. mental retardation
    d. emotional problems

22. Learning disabled children spending the entire school day in the same classroom are in a:

    a. resource room
    b. itinerant teacher program
    c. self-contained class
    d. consultative or special materials program

23. A significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period is the definition for:

    a. epilepsy
    b. mental retardation
    c. emotional problems
    d. learning disabilities

24. A mentally retarded child requiring almost complete supervision throughout his life is classified for rehabilitation purposes as:

    a. totally dependent
    b. educable
    c. trainable
    d. none of the above

25. Down's Syndrome (mongoloid) is a type of mental retardation caused by a:

    a. prenatal factor
    b. genetic factor
    c. postnatal factor
    d. psychological factor

26. A behavior interfering with a child's learning and social functioning indicates:

    a. a seizure
    b. mental retardation
    c. a learning disability
    d. an emotional problem

27. The theory concerned with the fact that the environment is perpetuating an inappropriate behavior by the child is known as the:

    a. psychodynamic theory
    b. biophysical theory
    c. behavioral theory
    d. environmental theory

28. A physician who specializes in the treatment and care of the nervous system is known as:

    a. a neurologist
    b. a psychiatrist
    c. a physician
    d. an endocrinologist

29. A physician, who specializes in dealing with diseases or malfunctions of the ear, nose, and throat is known as:

    a. an otolaryngologist
    b. an ophthalmologist
    c. an audiologist
    d. an optometrist

30. A therapist who treats disease and disability by physical means, including among other measures, water, air, heat, cold, massage, exercises, and electricity is known as:

a. an occupational therapist
b. a corrective therapist
c. a physical therapist
d. a recreational therapist

PROJECT: C.H.A.N.G.E.
TITLE IV C - ESEA
PRIMARY ATTITUDE SURVEY

INSTRUMENT DESCRIPTION:

The Primary Attitude Survey is an individual multiple choice (5 option) thirty item instrument designed to provide an estimate of a non-handicapped subject's attitude toward handicapped individuals. A non-verbal - motor response (pointing to the picture plate) is the only requirement of the subject.

This instrument is not timed but generally requires seven minutes per child, after the pre-training session.

MATERIALS:

The Primary Attitude Survey question sheet, the large Pre-training Primary Attitude Survey Picture Plate, a score card for each subject, a number 2 pencil and small picture plate for each examiner and a clipboard per examiner are required materials for survey administration.

PRE-TRAINING:

A group pre-training session is administered prior to the survey. The pre-training session is generally ten (10) minutes per class. The large Primary Attitude Survey Picture Plate is used in class demonstrations.

Place the large picture plate in an area where it is visable to all students in the class. Explain the process of a survey by saying, "today some people are going to ask you questions to see how you feel about something. This is called a survey. Most of you have seen surveys on television or in shopping centers and just didn't know what the word survey meant. For example, sometimes on a TV commercial or in a store a person will ask people the kind of soap they would rather use, this soap or that soap."

The examiner continues saying, "In another survey they ask people whether or not they think their family would rather eat potatoes or stuffing. Whoever they ask then tells the person what they would rather have to eat. How many of you have seen some kind of survey like this?" (Ask the subjects to raise their hands if they are familiar with the examples).

The examiner continues saying, "I want you to look at all of these pictures (using large picture plate). In the first circle, (point to circle A) we see two people - these people are blind." Ask subjects if they know what the word blind means. If they do, go to the next circle (C). If they do not, say, "blind people are people who cannot see."

The examiner then points to circle C. "In this circle there are two ordinary people. The word ordinary here means they are normal or have no problems with their bodies." The examiner points to circle E. "In this circle, these two people are deaf." Ask subjects if they know the meaning of the word deaf. If they do, go on to circle D. If they do not, say, "deaf people are people who cannot hear."

(Examiner points to circle D). "Now look at circle D. There are two people who are physically handicapped. A physically handicapped person may not be able to walk, move an arm or a leg, or may have lost an arm or leg".

Point to circle B. "This is the everybody circle, one person from each group is in the everybody circle". Illustrate this by pointing from the A, C, E, and D circle to show the person in B circle which corresponds.

The examiner tells the subjects, "these are the answer choices for the questions we are going to ask you. I will point to each circle and we will say the word which goes with each circle five times. Let's start now (ex., blind, blind, blind, blind, blind)." Do this with each circle.

Tell the subjects, "I will ask some of you to come up and point to the circle of the word I say". Call a subject to come up. Ask subject to show you the everybody circle. Do this once for each circle. If more repetitions are necessary continue until subjects have a clear understanding of the word and its correspondance to the appropriate circle.

In Kindergarten and First Grade rooms, you may wish for all subjects to point to a circle. Other subjects can applaud when the appropriate response is given. This is an effective reinforcement at the Kindergarten, 1st grade level and in primary special education classes.

ADMINISTRATION: Instructions for individual examiners.

1. This survey is to be administered to each subject individually after the pre-training session check to see if the subject needs more familiarization with the picture plate.

   Examiner: "I want you to look at all the pictures on this plate" (point to each picture circle as you describe it). "The first circle shows two people who are blind. Now look at this circle, it shows two people who are ordinary". Continue in this fashion until all five picture circles are described. If the subject needs this information to be repeated now or at any time during the survey, repeat the information.

1. Make sure the subject is told, "now I am going to ask you some questions to see how you feel. Look at all the pictures before you point". Read the first item and then say, "did you look at all the pictures?" If the subject says no, tell him to look at all the pictures, then repeat the statement before you record the response.

3. DO NOT PROMPT the subject or give any further explanation of the statement, other than those included in the script.

RECORDING: Scan-tron card

1. Make sure the subject's name, the teacher's name, and the grade is written on the response card.

2. Mark the box (A, B, C, D, E) of the picture the subject points to next to the corresponding statement number. The boxes are to be completely darkened by using a number 2 pencil. Response numbers 1 through 30 should be marked for each child.

Scoring

The Primary Attitude Survey is hand-scored, Alternative B is given three points credit; Alternatives A, D, and E are given 2 points credit; and alternative C is given 1 point credit minimum and maximum scores are 30 and as respectively.

PRIMARY ATTITUDE SURVEY

1. Who would you like as your friend? Point to the picture.
2. Who can do the same things as you? Point to the picture.
3. Who is a good as you? Point to the picture.
4. Who would you let help you with schoolwork that you did not understand? Point to the picture.
5. Who could do as good in school as you? Point to the picture.
6. Who do you think is like you? Point to the picture.
7. Who is as friendly as you? Point to the picture.
8. Who would you like to play with? Point to the picture.
9. Who do you think could be happy? Point to the picture.
10. Who do you think could feel sad? Point to the picture.
11. With whom would you share your toys? Point to the picture
12. At whose house would you like to stay overnight? Point to the picture.
13. Who would like to be told they have done a good job? Point to the picture.
14. Who would you like to sit next to in school? Point to the picture.
15. Who would look as nice as you do when going somewhere special? Point to the picture.
16. Who feels good about themselves and likes themselves? Point to the picture.
17. Who could have the same kind of job that you could? Point to the picture.
18. Who is as smart as you? Point to the picture.
19. Who would you choose as your partner in a game? Point to the picture.
20. Who would you like to have as the other children in your class? Point to the picture.

Primary Attitude Survey
Page 2

21. Who would be able to play the piano? Point to the picture.

22. Who might need extra help with their schoolwork from the teacher? Point to the picture.

23. Who would you like to help? Point to the picture.

24. Who do you think has the same kind of feelings as you? Point to the picture.

25. Who can marry and have a family? Point to the picture.

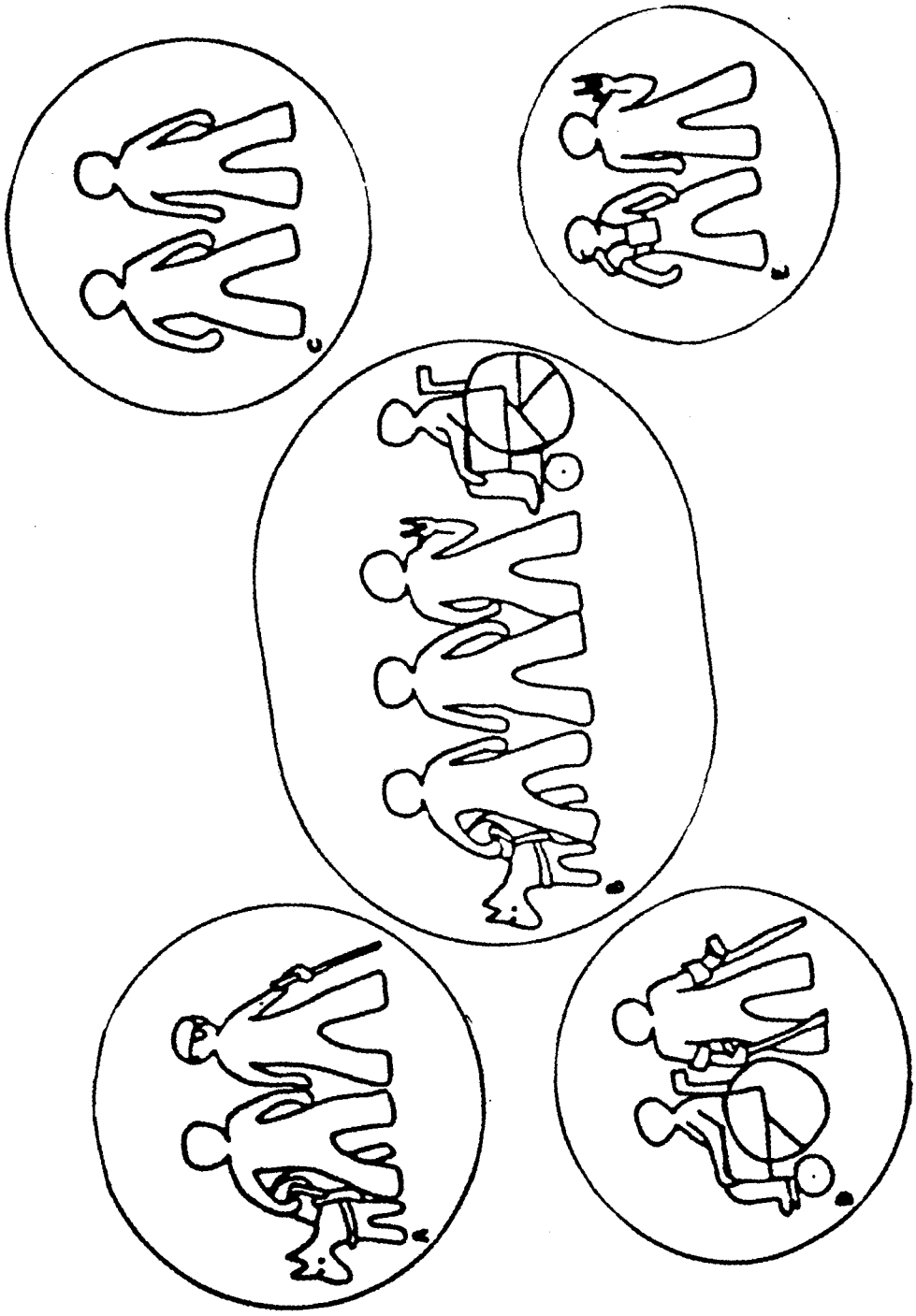
26. Who could be a teacher? Point to the picture.

27. Who would you invite to your birthday party? Point to the picture.

28. Who can take care of themselves (dressing or washing)? Point to the picture.

29. Which new students would you like to have as your friends? Point to the picture.

30. Who would feel badly if they could not do something well? Point to the picture.



PROJECT: C.H.A.M.C.E.
TITLE IV C - ESEA

INTERMEDIATE AND JUNIOR HIGH ATTITUDE SURVEY

Instrument Description

The Attitude Survey is a group test which is administered to the class by the teacher. This instrument is designed to measure attitudes of non-handicapped students toward handicapped individuals in the following areas:

I physical appearance
II personality traits
III expectancy
IV marriage
and V emotional capabilities

Materials

The examiner has a copy of the Attitude Survey for the appropriate grade level. Students must have a score sheet and a number two (No. 2) pencil.

A blackboard for key sample pattern.

Score Sheet

On the score sheet, the students are to fill in their names and grades or section number. The name goes in the appropriate space on the left side of the scan-tron card. The grade or section number is to be recorded in the space labeled subject.

All answers are to be recorded with a No. 2 pencil. The number on the score sheet corresponds to the question number.

Please draw the following sample at the board:

I agree very much	I agree	I disagree	I disagree very much
(A)	(B)	(C)	(D)

Then read the following statement:

1. School should end at 2:30 p.m.

Let one subject go up to the board and color in the appropriate box which reflects his or her opinion. If necessary please repeat the demonstration until satisfied that the students understand the correspondence of the number of the question to the answer and the relationship of their letter choice. The E box on the score sheet is not used. Please tell subjects to ignore this box and to avoid marking in it.

General Instructions

Each subject is to receive a score sheet. Only the examiner will have a copy of the survey questions. The examiner is to ask the students "Do you know what a survey is?" If subjects have the concept of a survey, no further explanation is necessary.

If subjects are not familiar with the concept of a survey the examiner says, "A survey is asking you how you feel about something. This survey is going to ask questions on how you feel about handicapped people. Handicapped people are those who have a disability in a certain area. They may have problems with walking, talking, hearing, seeing, or thinking. This survey is asking questions which refer to all the handicaps in a general way. Just the same way we would use the word normal, average, or ordinary to describe all people."

The examiner continues saying, "Please answer every question. Remember on a survey there is no right or wrong answer because we are talking about feelings. I will read the questions twice. The first time just listen, the second time - please mark the box for your answer choice on the score sheet."

The answer choices should be printed on the black board as shown below:

I agree very much	I agree	I disagree	I disagree very much
(A)	(B)	(C)	(D)

Answer choices should remain on the board during the survey. Remind students to make their marks within the lines and to press hard so answers are legible.

Scoring

I. Intermediate Attitude Survey

A. This 30 item test is hand scored with available keys.

B. Choices are assigned point values as follows:

A = 1 pt., B = 2 pts., C = 3 pts., D = 4 pts.

C. Items 2,3,5,8,9,13,15,18,23,24, and 25 are items stated positively; therefore letter changes are made before scoring. For example, if item #2 is marked A, it would be changed to D; or if item #9 is marked C, it would be changed to B.

II. Junior High Attitude Survey

A. This 25 item test is hand scored with available keys.

B. Choices are assigned point values as follows:

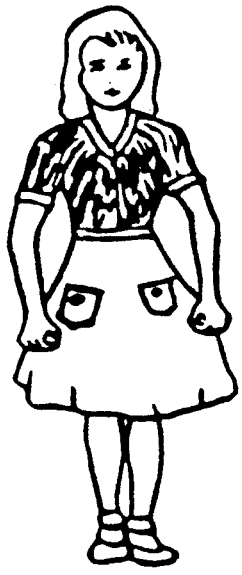
A = 1 pt., B = 2 pts., C = 3 pts., D = 4 pts.

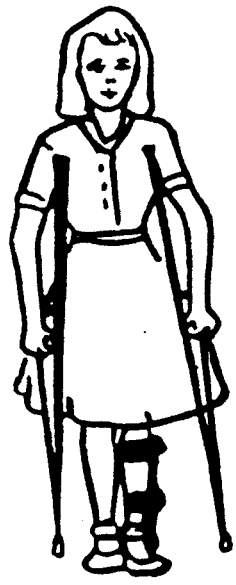
C. Items 2, 12, 19, 21 are items stated positively; therefore letter changes are made before scoring. For example, if item 12 is marked D, it is changed to A; or if item 19 is marked B, it is changed to C.

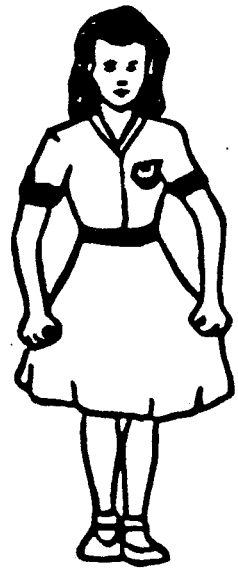
JUNIOR HIGH ATTITUDE SURVEY

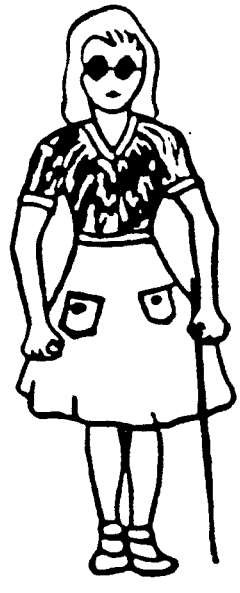
1. Society accepts handicapped individuals for themselves.
2. People should not be ashamed of the physical appearance of their handicapped friends and relatives.
3. Disabled people should not be allowed to run for public office President, etc.
4. Disabled people would make poor parents because of their inability to care for their children.
5. Generally, I would ignore or not look at a handicapped person unless they spoke to me first.
6. Most handicapped people worry more than non-handicapped people.
7. Handicapped children in special education rooms have it easier in school than non-handicapped children.
8. A non-handicapped person would not want to date a handicapped person.
9. Disabled workers cannot be as successful as non-handicapped workers.
10. Handicapped people are not as emotional as non-handicapped people.
11. Handicapped people like to have their friends to be handicapped.
12. Most handicapped people can have a satisfying job.
13. Handicapped persons require more praise than non-handicapped people.
14. Handicapped people should not be allowed to compete in sports with non-handicapped people.
15. Most handicapped people have less ambition.
16. Most handicapped people would rather be left alone.
17. Handicapped people are less considerate of others feelings than non-handicapped people.
18. Handicapped people should not be doctors or lawyers.
19. Handicapped people have something to offer to society.
20. There are more misfits among handicapped people.
21. Most disabled people can have a family.
22. Disabled people expect sympathy because of their problems.
23. All disabilities are easy to notice.
24. Handicapped persons should not expect to lead a normal life.
25. The intelligence of disabled persons is always less than that of normal people.

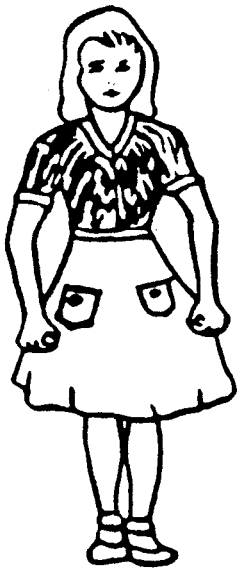
APPENDIX E

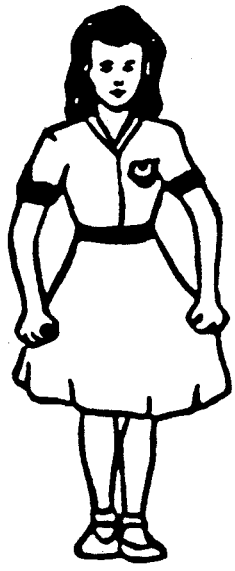


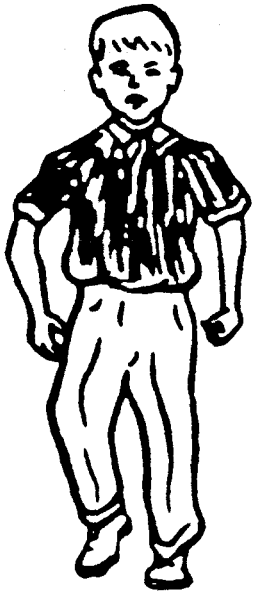


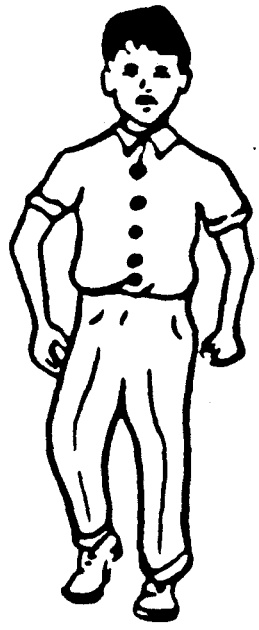


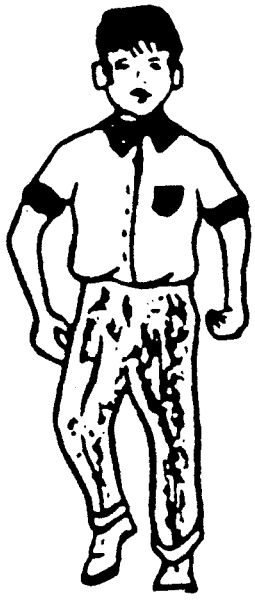


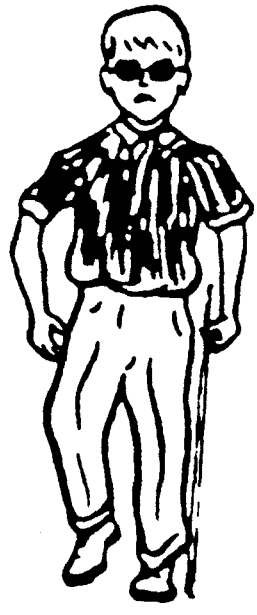


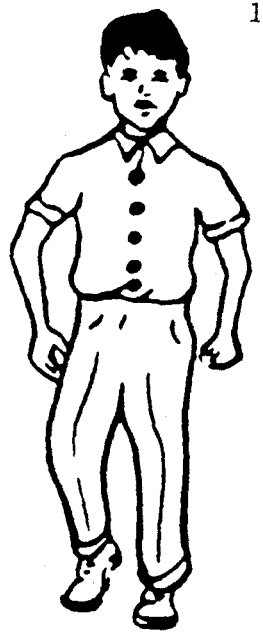


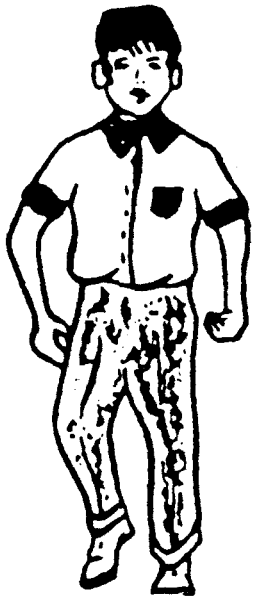


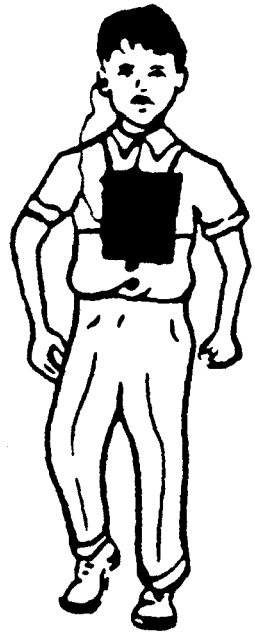


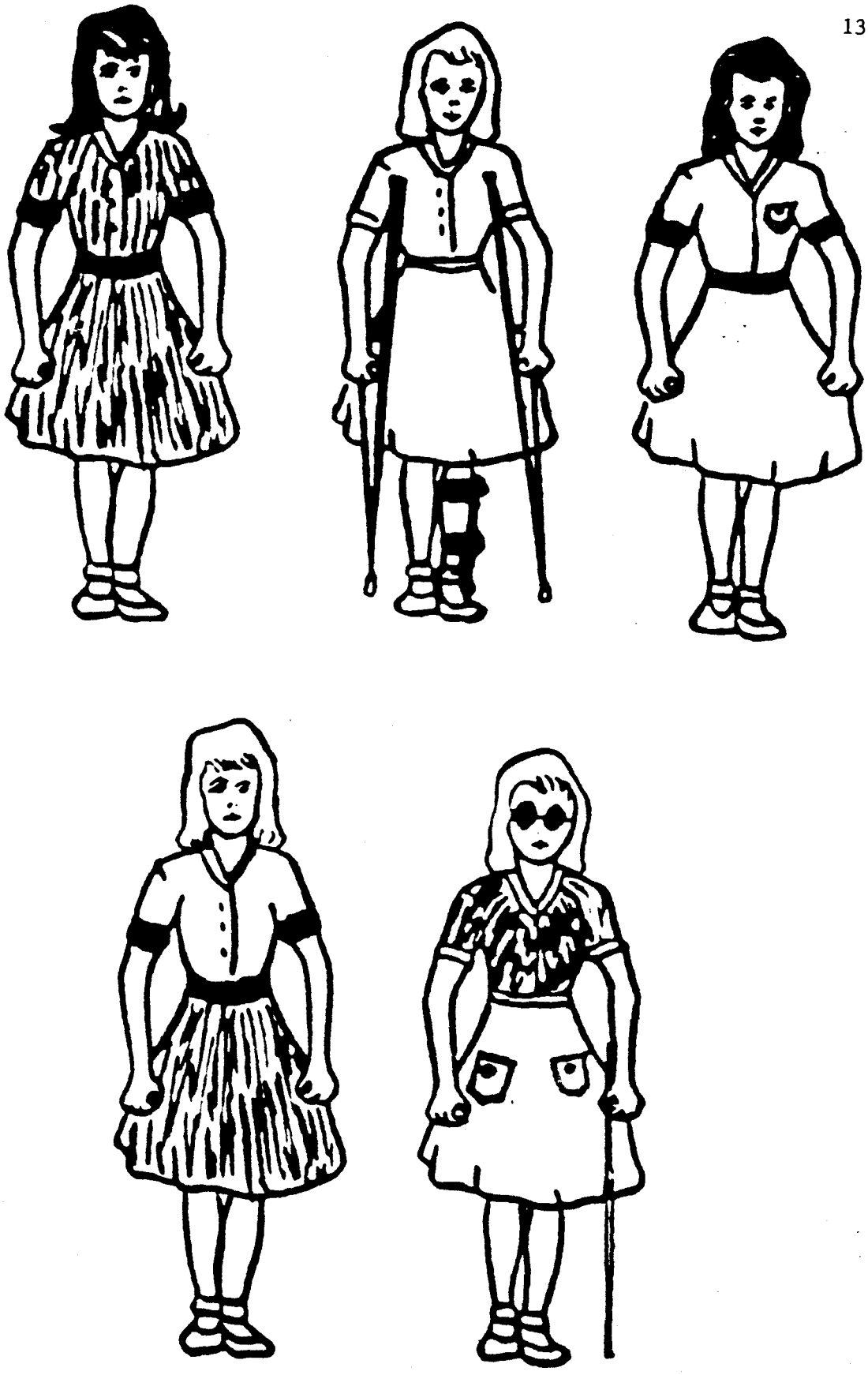


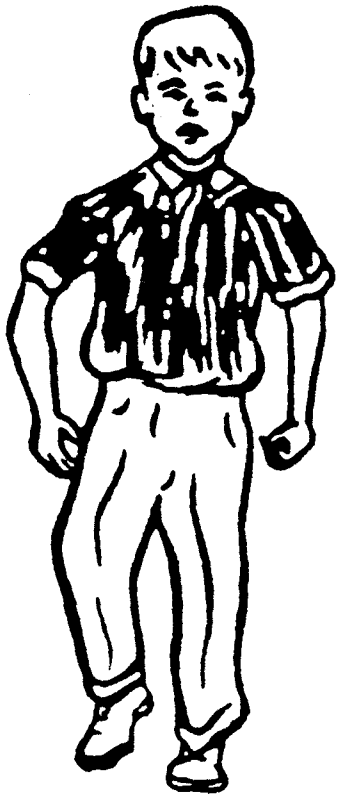


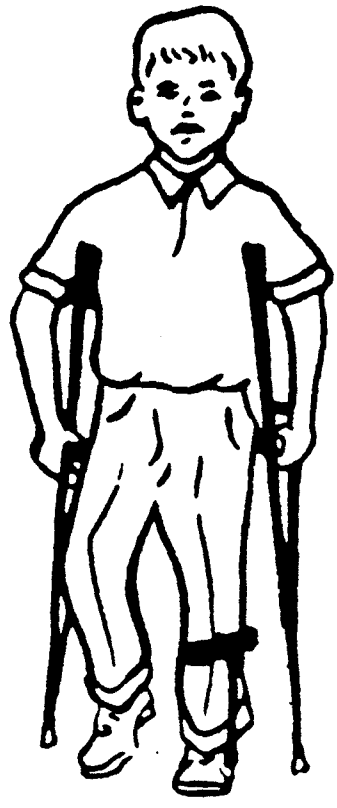


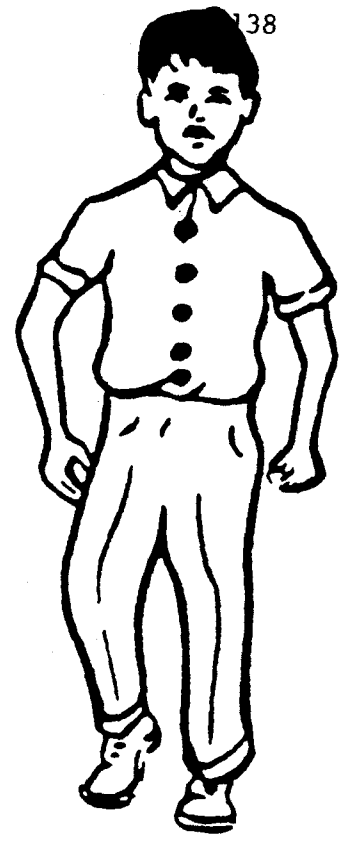


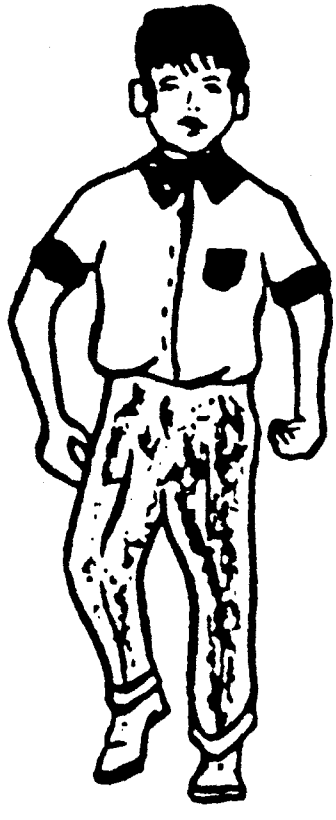


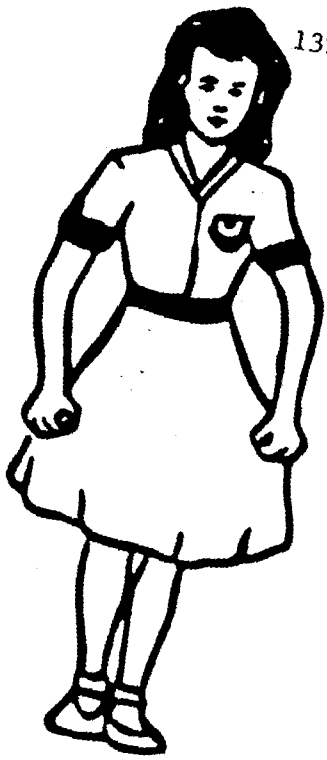


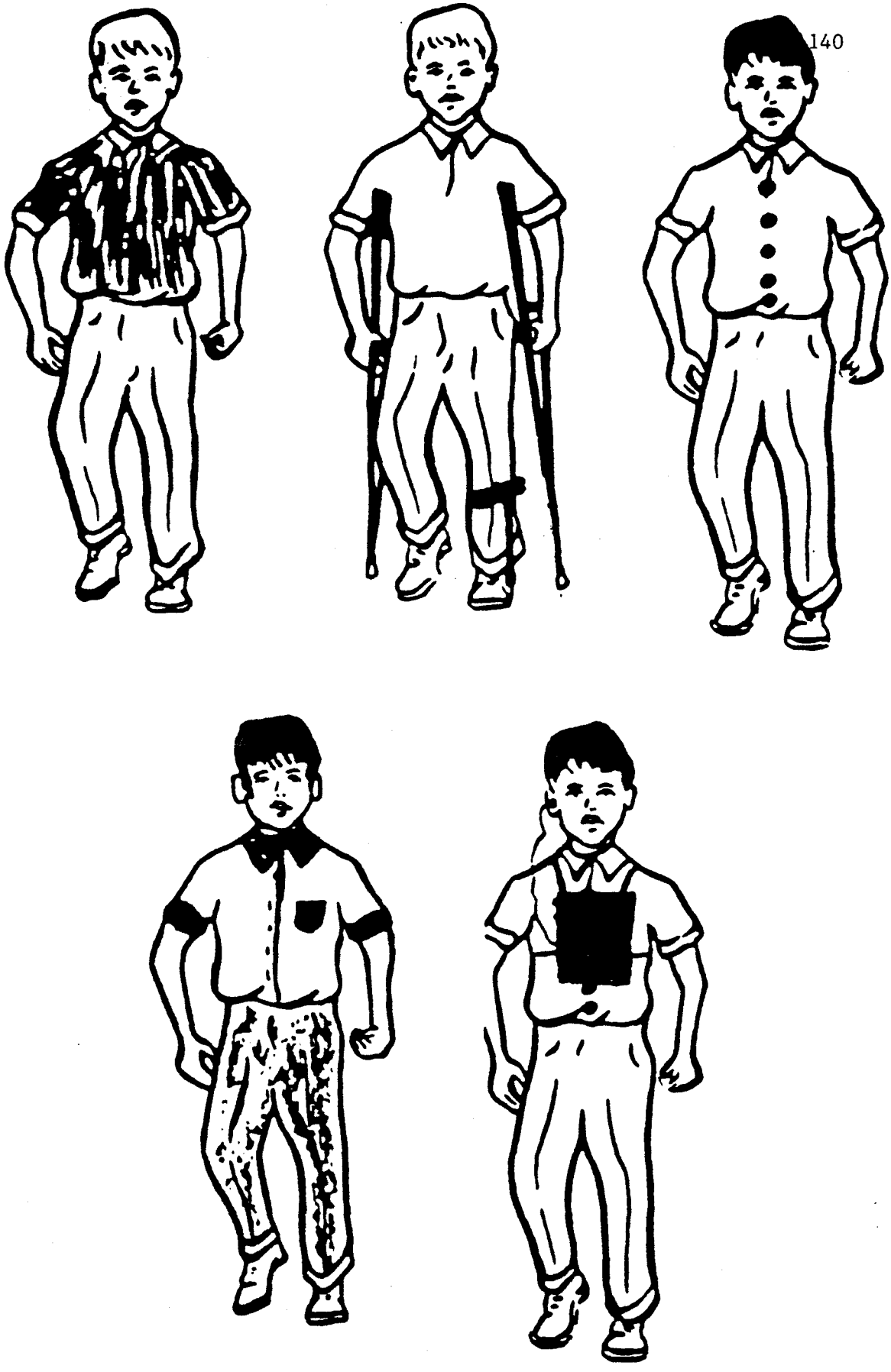


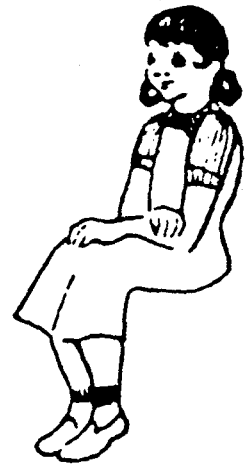


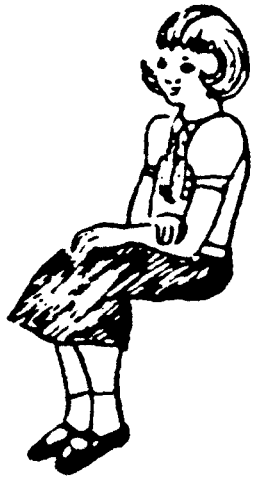


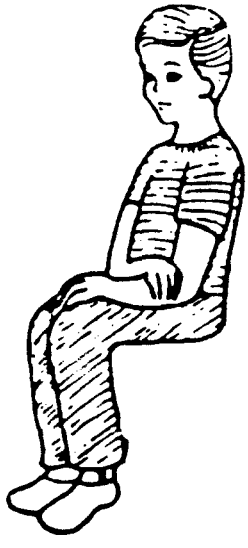


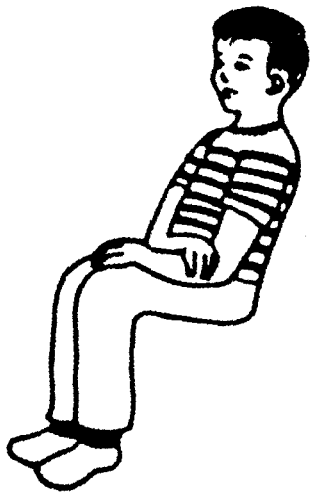


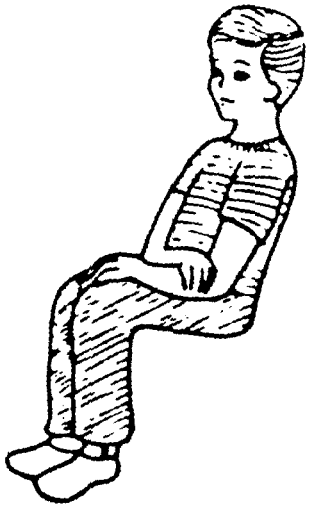


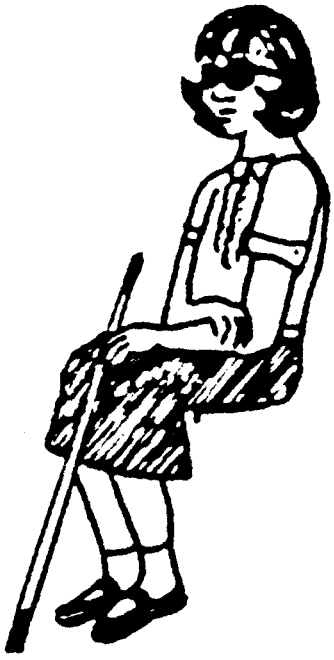


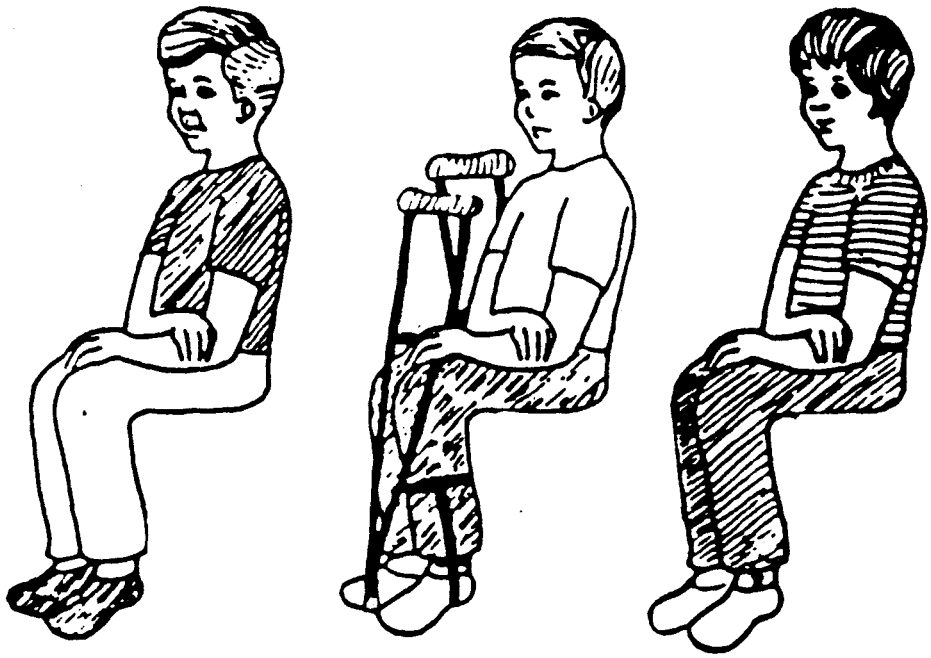


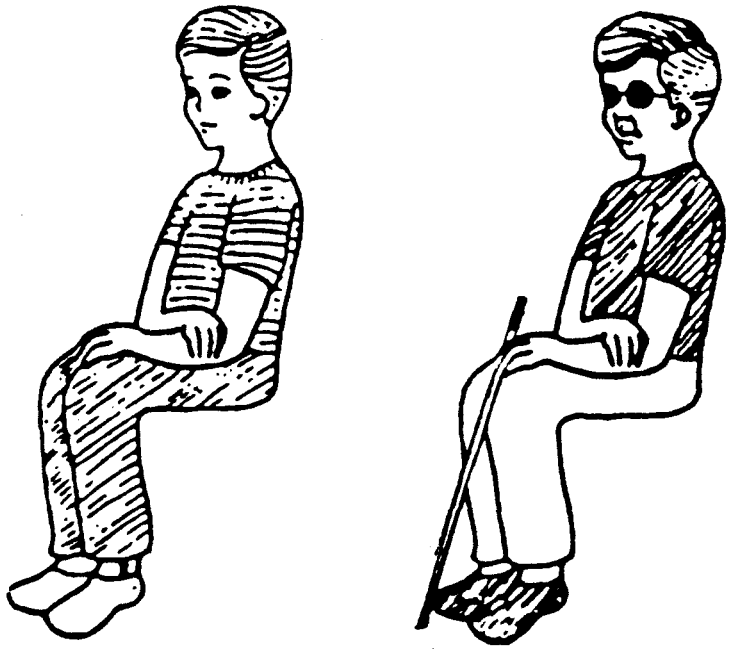


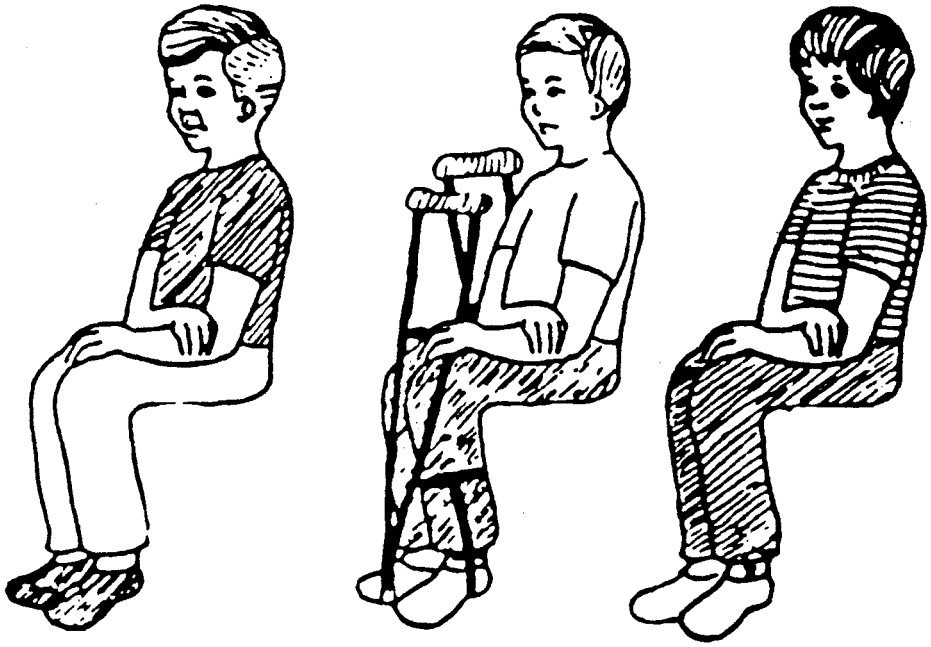


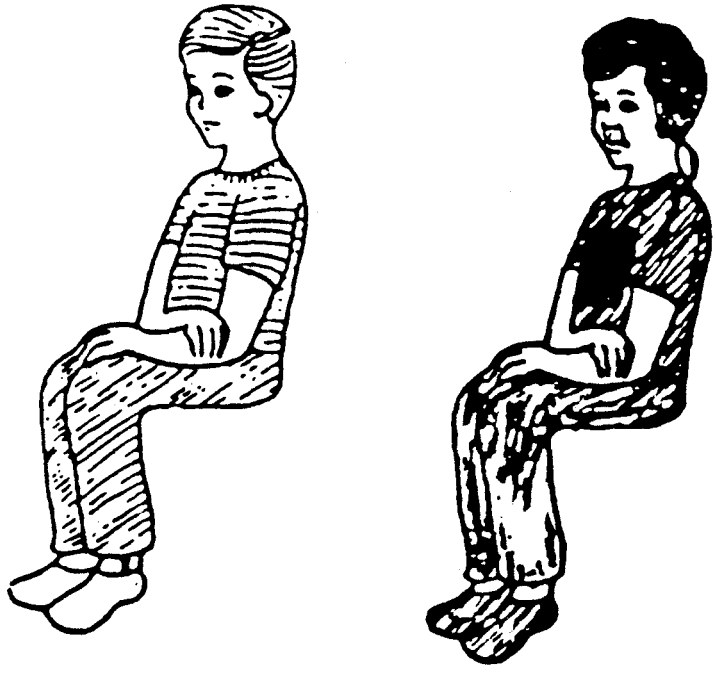


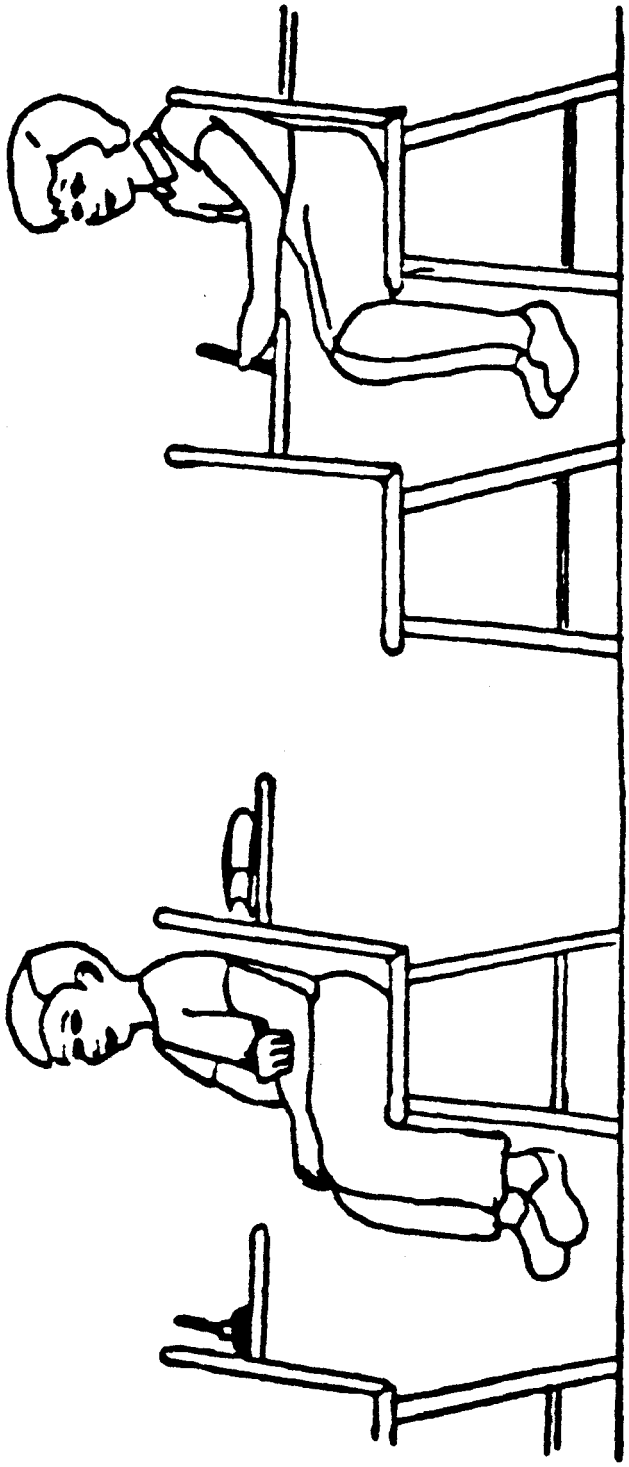


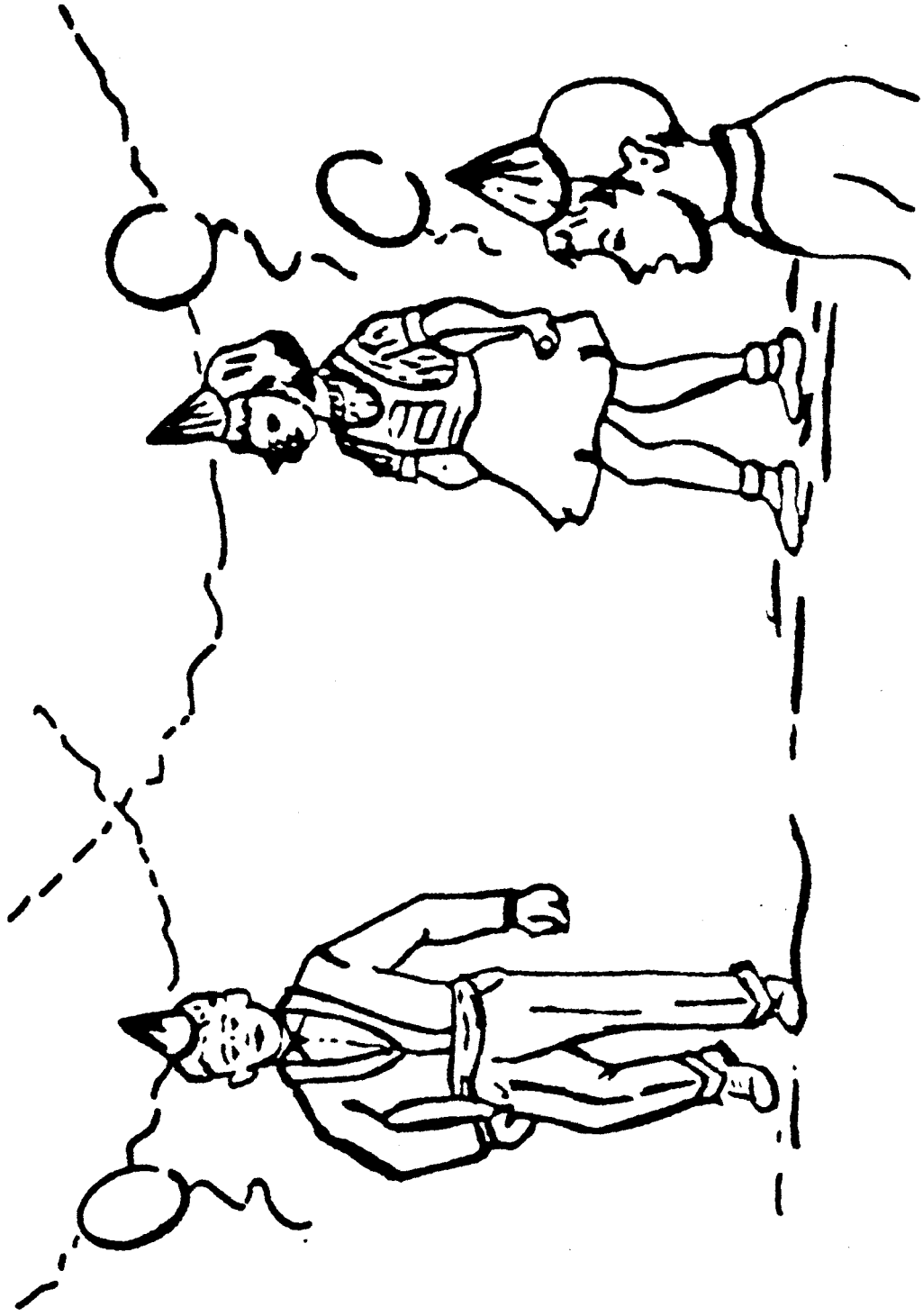


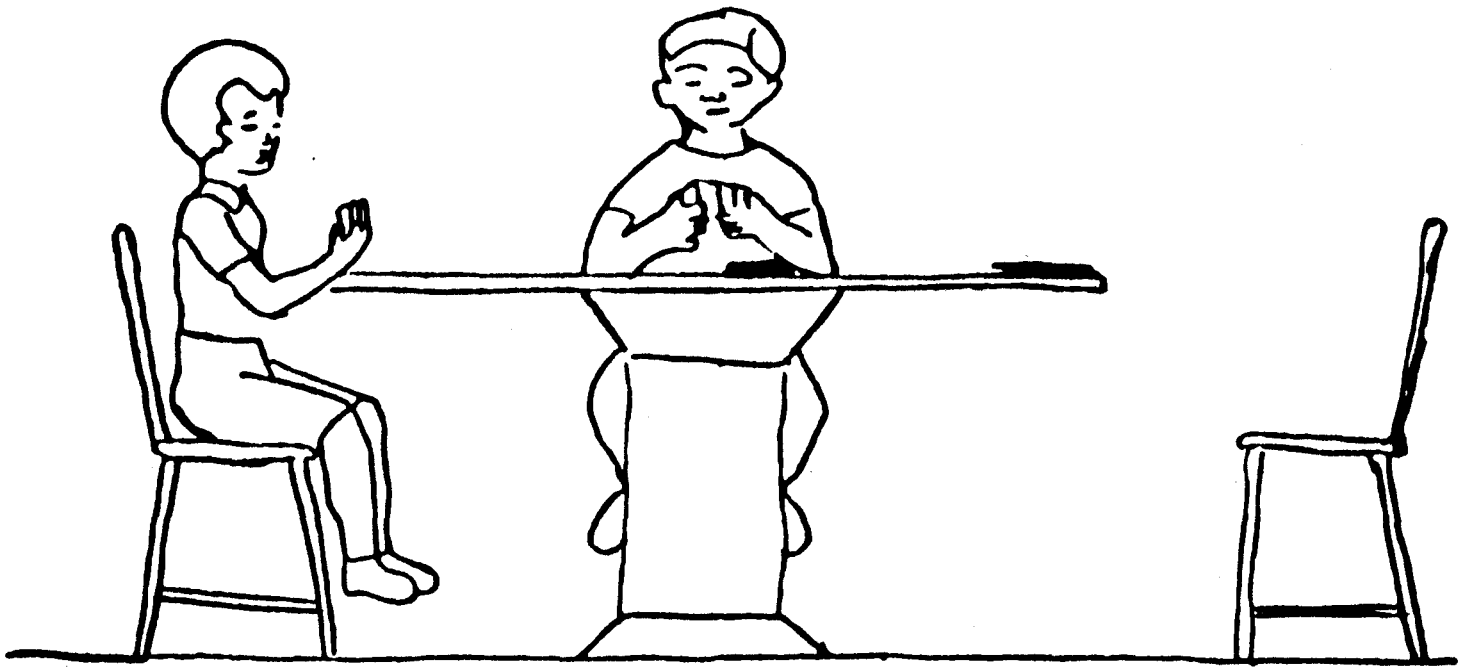


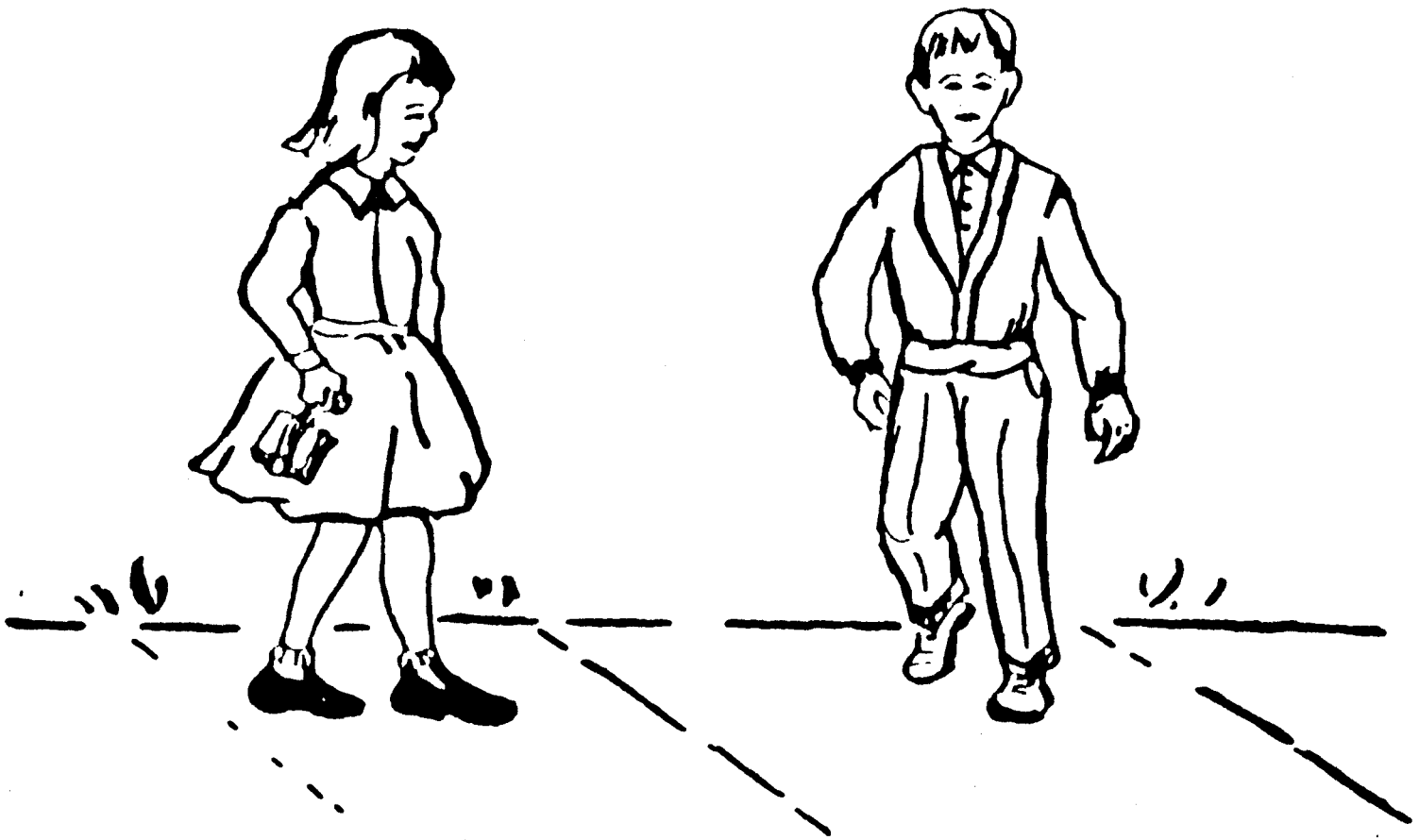


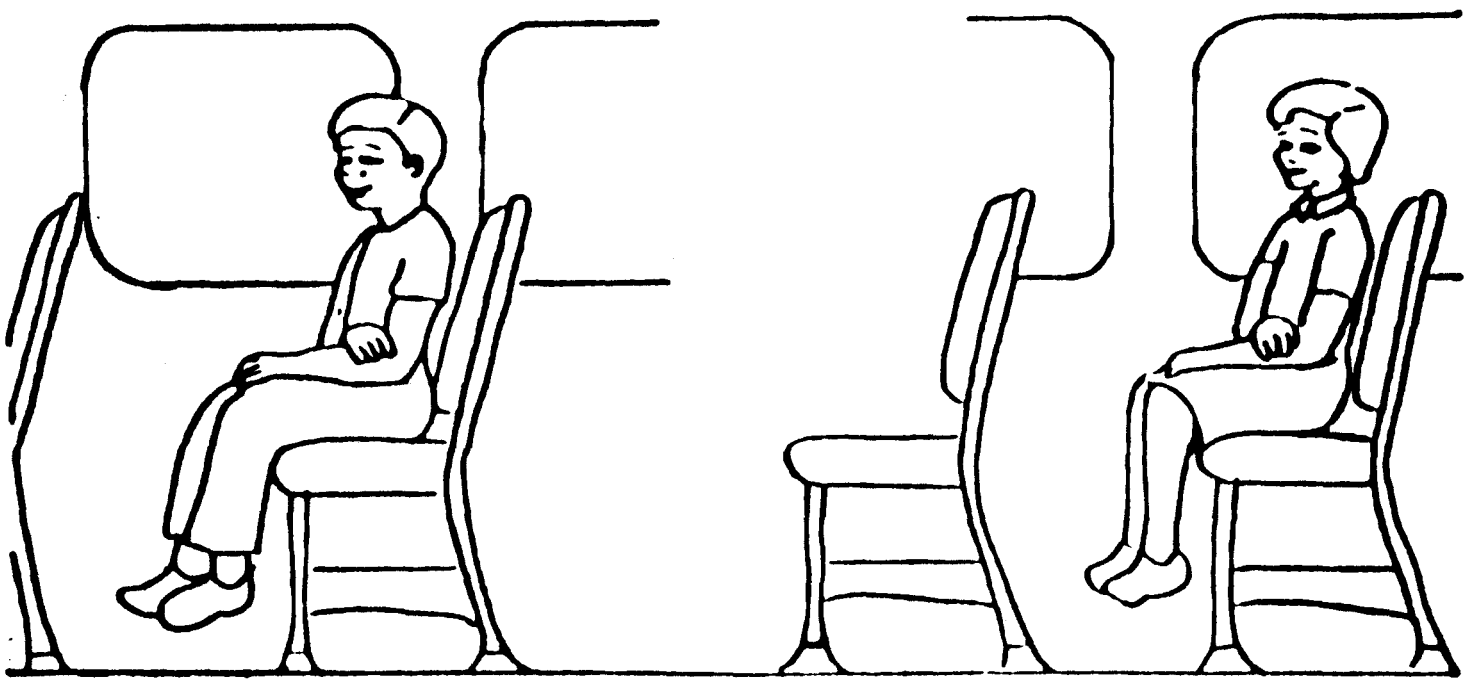




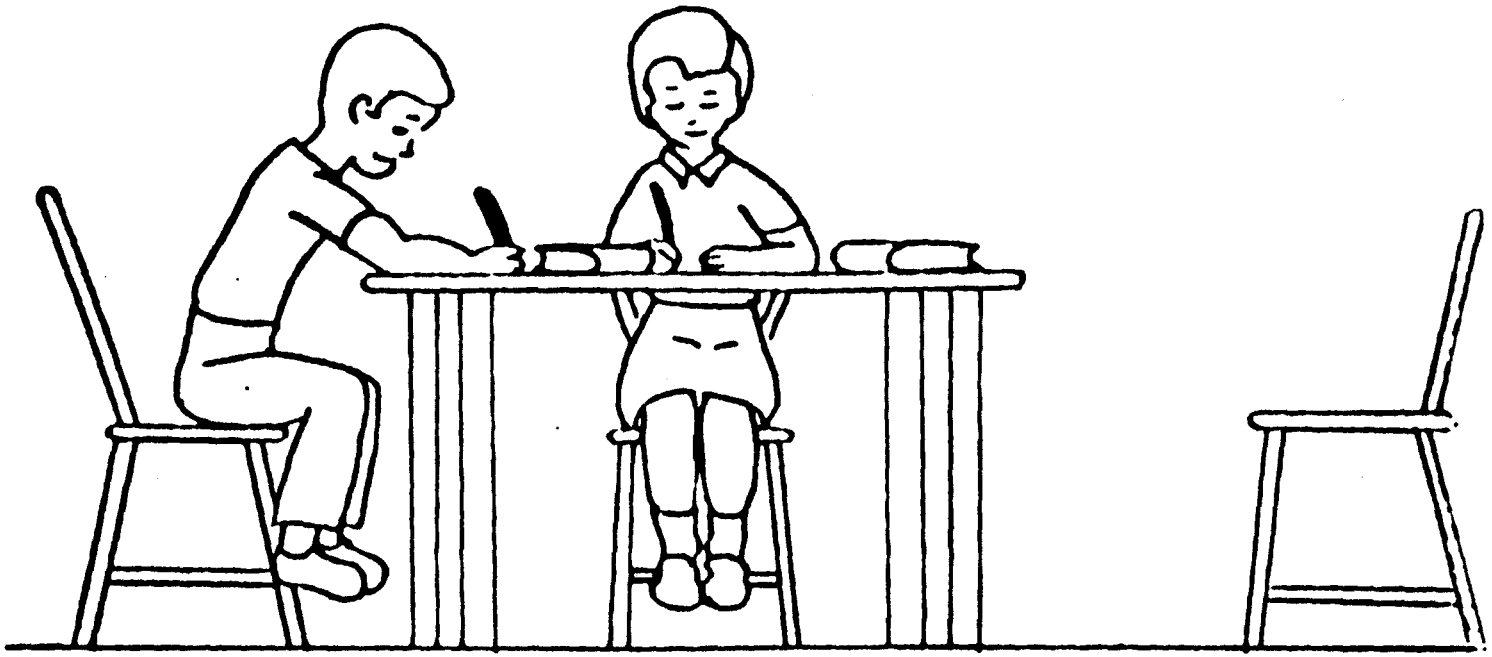


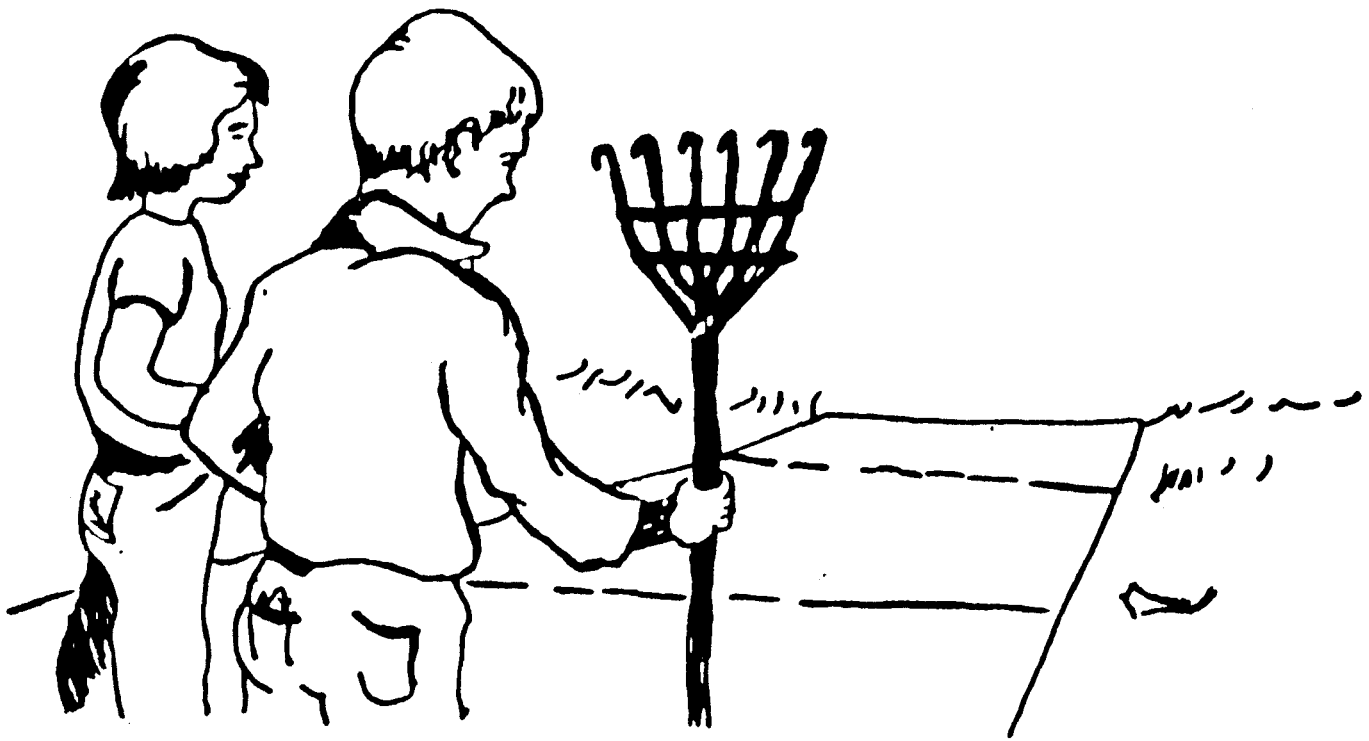


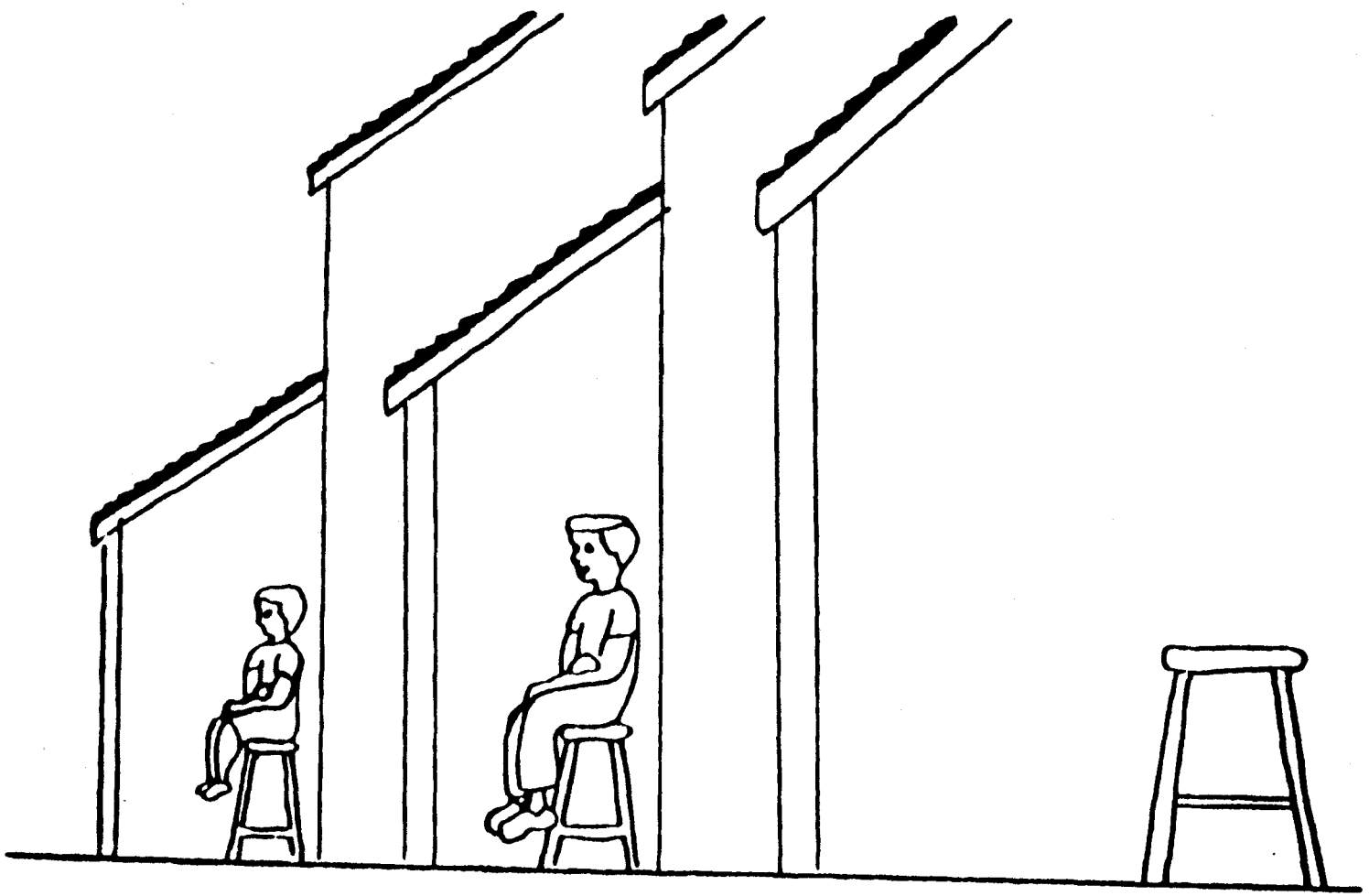


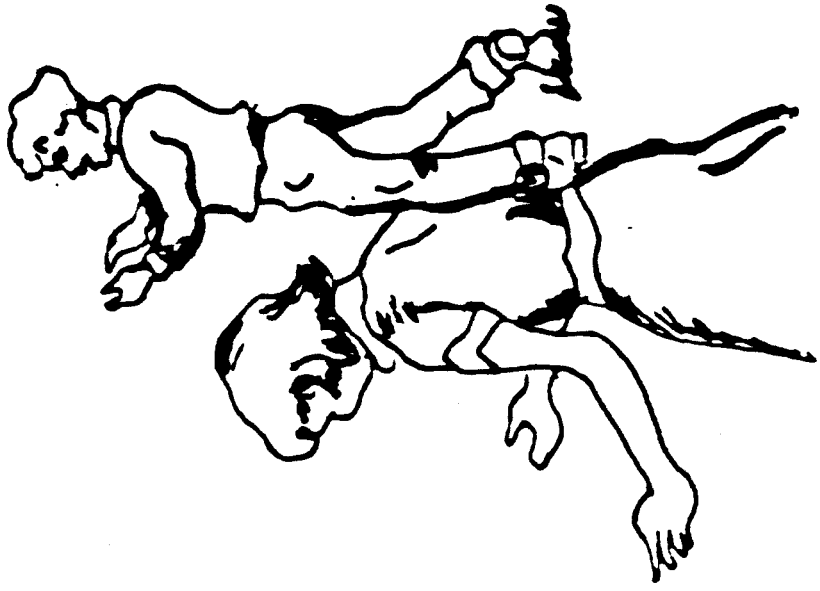


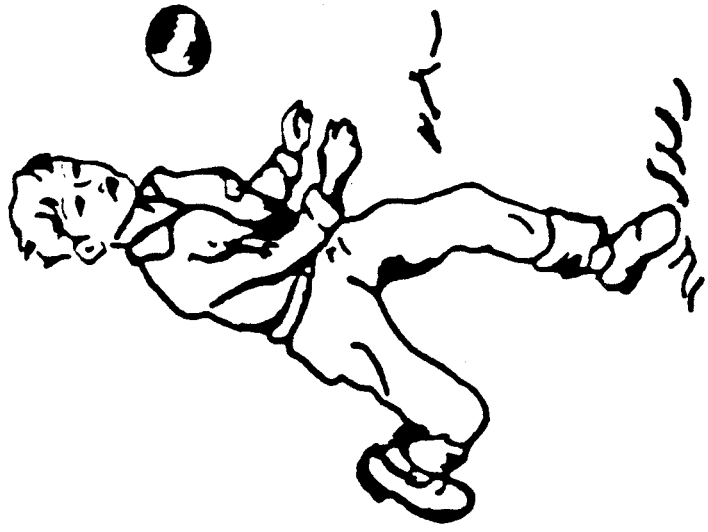

MOVIES











APPENDIX F

CODE NUMBER _____

NAME: _____ SEX____ AGE____ SCHOOL _____

ADDRESS: _____ GRADE _____

CITY _____ DATE _____

SITUATION NUMBER:	SELECTIONS: 1st	2nd	3rd	4th	5th
#1					
#2					
#3					
#4					
#5					
#6					
#7					
#8					
#9					
#10					

CALCULATIONS:

P	V	H
__X1= ___	___X1=___	___ X1=___
__X2=____	___X2=___	___ X2=___
__X3=___	___X3=___	___ X3=___
__X4=___	___X4=___	___ X4=___
__X5____	___X5=___	___ X5=___

TOTAL POINTS _____

APPROVAL SHEET

The dissertation submitted by Ann Marie Farrell has been read and approved by the following committee:

Dr. Ronald R. Morgan, Director
Associate Professor, Foundations of Education, Loyola

Dr. Carol Harding
Assistant Professor, Foundations of Education, Loyola

Dr. Jack Kavanagh
Associate Professor, Foundations of Education and Associate Dean, School of Education, Loyola

Dr. Edward Rancic
Lecturer, Administration and Supervision, Loyola

The final copies have been examined by the director of the dissertation and the signature which appears below verifies the fact that any necessary changes have been incorporated and that the dissertation is now given final approval by the Committee with reference to content and form.

The dissertation is therefore accepted in partial fulfillment of the requirements for the degree of Doctor of Philosophy.

December 3, 1984
Date


Director's Signature