

THE IMPACT OF A SHORT UNIT OF EMH STUDENTS
IN A MAINSTREAMED CLASSROOM

By

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CHAPTER I

INTRODUCTION

Public Law 94-142, "Education for All Handicapped Children Act of 1975," was passed by congress November 21, 1975 and took effect on October 1, 1977. This act dealt with many types of handicaps including educable mentally handicapped (EMH). The term "retarded" was replaced by the term "handicapped" in deference to pressure from educators and parents of people with a below normal intelligence quotient (IQ). Public Law 94-142 reads in part as follows:

. . . to assure that handicapped children receive special education and related services in the least restrictive environment commensurate with their needs and to improve programs of instruction for handicapped children . . . (United States Statutes at Large, 1975, p. 792.

The implications, validity, and timing of this law were argued at all levels of the government. Teachers in individual school districts also argued. Griffith (1977, p. 72) said,

Whether teachers agree or disagree that EMR [EMH] students should be placed in regular classes, they are there, and the fact must be accepted. Teachers are bound by law to work with the handicapped, including the mentally retarded, in the 'least restrictive environment.' The least restrictive environment means that EMR students will not be restricted to the special education classroom but will be enrolled in other classes, such as home economics.

Much research (Lapp, 1957; Sheare, 1974; Calhoun and Elliott, 1977) was done on the importance of social acceptance and self-concept of the EMH since they were mainstreamed into the regular

classroom. Griffith (1977, p. 73) commented that: "One of the most damaging things a teacher can do to their [EMH] already low self-concept is to allow them to become observers." They should be as actively involved as possible in all phases of the regular classroom. Regular students should also be actively involved in the best learning experiences available. In fact, Calhoun and Elliott (1977, p. 379) emphasized that:

. . . by 'regular classroom' here does not mean what often is accepted as 'regular.' The entire structure of the classroom must be modified not only to accommodate the special child, but also to provide individualized instruction more effectively to all children in the class.

Home economics teachers have many opportunities to help all students develop a positive self-concept. Since students learn in various ways and at various speeds, opportunities to teach a positive self-concept should be planned so that all students can learn the most they are capable of learning. Clothing is an important aspect in regard to self-concept and is an area of study that is tangible and useful to all students. According to Drake and Ford (1979, p. 287), "there is considerable empirical evidence that feelings of clothing deprivation are significantly related to lack of social confidence and to low self-concept." The study of clothing has many aspects, but the researcher views color and line as important segments of clothing selection. It is believed that students who can select pleasing colors and lines for their own clothing will feel more confident in themselves which can in turn help them to develop a more positive self-concept.

For regular classroom educators to teach the EMH child effectively, they must be able to determine the EMH child's ability to

increase knowledge in a regular classroom situation. This problem of learning has not yet been adequately researched.

Purpose and Objectives

Mainstreaming is a current issue and the researcher usually has EMH students in her own classroom. This study is designed to better understand the problems of mainstreaming and of the EMH student. The purpose was to seek evidence of learning by a group of EMH students toward a specific learning experience while participating in a mainstreamed classroom situation. In order to discover if EMH students learn in the mainstreamed environment, the following objectives were developed to guide the study:

1. To determine if EMH students can complete individual activities normally presented to regular classroom students during regular school class periods.
2. To compare the time required for EMH students to take the pretest and posttest and the percentage scores made on the pretest and posttest.
3. To identify gains or losses in percentage scores between pretest and posttest of EMH students.
4. To compare the percentage scores between EMH and regular classroom students in all activities.
5. To make recommendations for further research based upon the findings.

Assumptions and Limitations

According to Cruickshank and Johnson (1975, p. 209), ". . . most

educable retarded children . . . are normal or within the normal range in most areas of their development. Their primary deviation is in the area of intellectual growth where development is significantly retarded." The lack of ability intellectually does not necessarily negate the interest a student might have. Therefore, it was assumed, for this study, that the EMH child would be interested in a study of clothing selection since it is a basic concern related to social acceptance, according to Drake and Ford (1979).

The attitude of the researcher involved with the experimental group was an important part of the success or failure of this research. The attitude of the researcher can usually be evidenced by the kind of environment provided for the students. It was, therefore, assumed that the "least restrictive environment commensurate with" the needs of the individual EHM student was provided which would indicate a positive attitude on the part of the researcher.

Several limitations were apparent in the study: The researcher has no EMH students in her own classes this year, therefore, the entire class of EMH students from a special classroom was transferred into the selected regular classroom for six days; the substantial increase in the number of students in the classroom caused a limitation of space and facilities; the short time period of six days was limiting to the EMH students' abilities to adjust to their new situation. The researcher's use of convenience sampling was also a limitation. Because these limitations existed, this sampling cannot be representative of any other known group.

Definitions

The following definitions were important for the clarity of this study:

EMH: An educable mentally handicapped person who, according to Oklahoma policies (Policies and Procedures Manual for Special Education in Oklahoma, 1978, pp. 20, 21, 71) is eligible for special education. Eligibility is determined by the Board of Education for each local school under the rules and regulations of the State Board of Education. Standardized tests, school achievement, general adaptive behavior, and environmental information are included in the school board's decision for placement.

Mainstreaming: Movement of students with special learning needs from special classes into the regular classroom.

Regular Classroom: A classroom for so-called normal children wherein the entire structure has been modified to provide individualized instruction effectively to all children and to accommodate the special child (Harris, 1976, p. 9).

Special Classroom: A class conducted by a certificated special education teacher wherein handicapped children report and spend the majority of the school day (Birch, 1974, p. 16).

WISC Test: Wechsler Intelligence Scale for Children. The purpose of this test is to determine if too much or not enough is being asked of the student. This test has two components: verbal and performance (Wechsler, 1974).

Woodcock Test: Woodcock Reading Mastery Test. The purpose of this test is to determine precise measures of reading achievement.

This test has five components: letter identification, word identification, word attack, word comprehension, and passage comprehension (Woodcock, 1973).

CHAPTER II

REVIEW OF LITERATURE

This study deals with education of the EMH student in a mainstreamed classroom. Four main concepts are reviewed and discussed in this chapter: (1) attitudes, social acceptance, and knowledge gain, (2) teacher attitude and its affect on the EMH student, (3) unit development for the mainstreamed students, and (4) learning theories related to the EMH student.

The Mainstreamed Child

The idea of mainstreaming, or integrating, EMH students into the regular classroom was not a new idea (Birch and Stevens, 1955; Lapp, 1957). With the passage of Public Law 94-142, however, mainstreaming received renewed attention. Many studies were found in the literature that concentrated on attitudes and social acceptance of the EMH child in the special class as compared with the EMH child in the mainstreamed class. Few were found, however, that concentrated on the problem of knowledge gain in the mainstreamed classroom.

Results of studies by Dilling (1969) and Gottlieb and Budoff (1973) implied that the attitudes of EMH students toward school and academics were more positive when they were integrated into regular classrooms. Warner, Thrapp, and Walsh (1973) also implied that EMH students prefer a special classroom much less than in the past.

Findings concerning the EMH student's social acceptance in the mainstreamed class were varied. One of the earlier and most quoted studies was made by Lapp (1957, p. 259).

The special class children were different from so-called 'normal' children in the regular class in that they were not sought out individually. Apparently other children tolerated them. Their low acceptance and rejection scores may indicate they tended to be more passive than active in the regular class situation. The special pupils were not overtly rejected. They had no special abilities to contribute to a group, but, on the other hand, had no personality trait to make them disliked.

Three other studies (Baldwin, 1958; Johnson, 1950; Johnson and Kirk, 1950) concluded that EMH children in regular classes were generally not accepted, but were isolated or actively rejected by their non-retarded classmates. A study by Rucker, Howe, and Snider (1969, p. 621) showed the following results:

1. Retarded children participating in regular junior high classes are less accepted than their nonretarded classmates.
2. Retarded children are as low in the social structure of nonacademic classes such as physical education as they are in academic classes such as science.
3. Retarded children overestimate their social acceptance in regular classes.
4. The more popular children in a special class tend to be more accepted by the nonretarded.

In addition, Monroe and Howe (1971) implied that the length of time a retarded student was mainstreamed did not apparently influence his or her acceptance.

The previously cited findings were quite in contrast to those of other studies. Renz and Simensen (1969) found special class EMH's who had been mainstreamed into elective-type courses and extracurricular activities were not rejected with greater frequency than the

"normal" child. Clark (1964) found special class EMH's, who had been mainstreamed into elective type courses and extracurricular activities, had a peer image that was based on achieved status. Sheare (1974) inferred that the mainstreaming of EMH students into regular classes results in more positive ratings of EMH children by nonretarded children and provides increased opportunities for interaction, association, and understanding. The results of a study done by Carroll (1967) favored the mainstreamed group on all counts, while Dunn (1968) called for the outright abolishment of special classes for the EMH child.

Hoeltka (1967), who evaluated 25 matched pairs of EMH students, found that the special class students had a more positive self-concept, but those in regular classes showed greater academic achievement. Bradfield, Brown, Kaplan, Rickert, and Stannard (1973) backed Hoeltka's findings with some provisions. EMH students improved academically in the regular classroom when individualized programs were utilized. A model group of six EMH students receiving individualized programs in a mainstreamed setting improved in their academic skills as much or more than six other EMH students taught without individualized programs in a mainstreamed setting. Calhoun and Elliott (1977, p. 380) also agreed with Hoeltka.

The data for achievement comparisons revealed that emotionally disturbed pupils in regular classrooms had better achievement scores than those in special classrooms. When comparing educable retarded groups in self-concept and achievement the results indicated that those in regular classrooms did significantly better than those assigned to special classrooms.

The essence, then, was that the EMH child improved academically in a mainstreamed classroom, but social acceptance, social status, or

position will not just "happen." These must be carefully planned for by the teacher.

Teacher Attitude on EMH

From research studies, teacher attitude was one of the most influential determinants of pupil achievement since it affected the students' academic performance as well as their self-concepts. As Deahl and Deahl affirmed (1970, p. 25), "A teacher's understanding and acceptance of the child will influence not only his attitude towards his peers and toward society in general, but also their attitude toward him." The attitude of a teacher toward exceptional children usually meant the difference also between poor self-images and wholesome learning experiences for the EMH child. A positive attitude of the teacher was more likely to result in greater concern for students and better planning for their achievement. For example, Cohen (1975, p. 15) said:

Informed teachers are aware of this fact and know that it takes something special to work successfully with many handicapped children, special in the sense of how you feel and special in the sense of what you know how to do.

A generally positive teacher attitude toward teaching handicapped students was found in several studies (Sattler and Notari, 1973; Johnston, 1972). Novotny (1974) implied that with supportive services provided, the integration of EMH students into regular classes had slight, if any, effect on teachers' attitudes.

Unit Development

As a result of Public Law 94-142, much information has been written by authorities, researchers, and educators concerning unit

development for the mainstreamed child in the regular classroom. Garrison and Hammill (1969) viewed the curriculum for EMH basically as job oriented terminal education and not achievement of academic par in the regular classroom. Kolstoe (1970, pp. 17-23) presented the following specific considerations for planning materials and in presenting tasks for the EMH student:

1. The tasks should be uncomplicated. The new tasks should contain the fewest possible elements; and most of the elements should be familiar, so the learner has very few unknowns to learn.
2. The tasks should be brief. This assures that the learner will attend to the most important aspects of the tasks and not get lost in a sequence of inter-related events.
3. The tasks should be sequentially presented so the learner proceeds in a sequence of small steps, each one built upon previously learned tasks.
4. Each learning task should be the kind in which success is possible. One of the major problems to overcome is that of failure proneness. This major deterrent to learning can be effectively reduced through success experiences.
5. Overlearning must be built into the lessons. Drills in game form seem to lessen the disinterest inherent in unimaginative drill.
6. Learning tasks should be applied to objects, problems, and situations in the learner's life environment. Unless the tasks are relevant, the learner has great difficulty in seeing their possible importance.

Although the view expressed by Kolstoe (1970) is probably true, there are many levels of ability among EMH students and curriculum should be planned to meet the varying needs. They are usually able to learn academically but slower and at a lower level than most of their classmates.

Learning Theories

Learning has always been the heart of the educational process. "Research on this topic has exceeded by far research on any other aspect of education" (Goodlad, 1971, p. v). He implied, however, that the problem must be interpreted with considerable caution since the classic learning studies were accomplished with animals rather than human beings. According to Bigge (1976), learning has been defined as an enduring change in an individual; it has been considered a change in insights, behavior, perception, motivation, or a combination of these. He stated (p. 2) that "there apparently is no group of human beings that has not, through learning, developed some devices for enriching its contacts with the world about it."

Based on Kolstoe's (1970) considerations for planning materials for the EMH, the researcher chose to review only a few of the many learning theories. The mental discipline theories of St. Augustine were based on "drilling." The discipline or punishment used to make the student "study" was mentally and physically harsh. For behavior theorists, learning was considered to be a change in behavior. The cognitive theories of Gestalt were based on a process of gaining or changing insights, outlooks, expectations, or thought patterns (Bigge, 1976). A general consensus, however, is that combinations of learning theories are needed to meet varying learning needs.

Hilgard (1956, pp. 486-487) presented a list of 14 statements on practical learning matters that theorists could agree upon. Three of these statements were believed relevant for the EMH learner.

6. Active participation by a learner is preferable to passive reception when learning, for example from a lecture or a motion picture.

10. Meaningful materials and meaningful tasks are learned more readily than nonsense materials and more readily than tasks not understood by the learner.
14. A motivated learner acquires what he learns more readily than one who is not motivated. The relevant motives include both general and specific ones; for example, desire to learn, need for achievement (general), desire for a certain reward or to avoid a threatened punishment (specific).

Bigge (1976) summarized the attitudes of most educational researchers when he implied that the major condition that a working principle must meet, is that it should not be in conflict with the system to which its practitioners are committed. However, it may be equally consistent with several systems.

Summary

Four main concepts were discussed in this chapter and the following conclusions were reached: Research showed opinions for and against mainstreaming related to its affect on attitude, social acceptance, and knowledge gain of the EMH students; there was a general agreement that teacher attitude was one of the most influential determinants of pupil achievement in a mainstreaming situation; specific guidelines were presented in some cases, suggesting that tasks presented to EMH students should be uncomplicated, brief, and repetitive; and varying learning theories and a general agreement of blending these learning theories were also presented.

CHAPTER III

RESEARCH PROCEDURES

This research was designed to show evidences of learning of EMH students by using pretests, posttests, other learning activities, and comments made by the students involved.

The class was taught late in the spring semester of 1979. On the first day a pretest was given to the EMH and regular classroom students to determine their knowledge of effects that color and line in clothing have on appearance. After the pretest was administered, a short motivational introduction to the unit was given. The researcher explained the possible "changes" color and line could give to their appearances. The ensuing four days consisted of discussion sessions with the use of flannel board paper dolls as visual aides. Each student was also given a basic fact sheet. After each discussion session the students were given individual assignments that reinforced the discussion (see Appendix A, pp. 33-43). They could work on these assignments at their own pace. On the sixth day, a posttest was given to both groups.

Sample

The subjects of the study consisted of nine EMH students and 19 regular students at Jenks Middle School in Jenks, Oklahoma. Convenience sampling was used since a small intact class was selected which

met at the same time as the smallest Home Economics I class. The group of EMH students was small and cannot be considered representative of any other population.

The EMH students had been part of a mainstreaming program for three years. They has no formal training in home economics prior to entering the Home Economics I class for this study.

The smallest Home Economics I class was selected as the regular class to be a part of the study. These students were enrolled in their first year of Home Economics and had received no prior teaching related to the subject.

EMH Participants

Age, grade level, I.Q., and comprehension level of the EMH participants are shown in Table I (p. 16). Age distribution of the EMH students ranged from 13 to 15. Five of the members were 14, two were 13, and two were 15 years of age.

Grade level of the participants ranged from grade six to grade eight. Only one student was in the eighth grade, three were in the sixth grade, and the majority (five) were in the seventh grade.

The distribution of I.Q. was from 40 to 85. No two students had the same I.Q. Student A rated very low in this category and was an autistic child. No special treatment was given that would relate to the study.

Comprehension level of the participants ranged from second grade, fourth month to fifth grade, third month. Only two students were at the same comprehension level of second grade, eighth month. All other participants varied in comprehension level.

TABLE I
BACKGROUND INFORMATION CONCERNING
EMH STUDENTS

Student	Age	Level	I.Q.*	Comprehension Level**
A	14	7	40	2.8
B	13	7	85	4.1
C	14	6	55	3.1
D	15	8	71	3.7
E	13	6	57	2.8
F	14	7	75	3.2
G	14	7	60	2.4
H	15	7	73	5.3
I	14	6	70	2.5

*As determined by the WISC test.

**As determined by the Woodcock test.

Regular Classroom Participants

Ages of the 19 regular classroom participants ranged from 12 to 14. Three students from the regular class were in the eighth grade, and the rest were in the seventh grade. Students at Jenks Middle School are not tested for I.Q. and comprehension level unless it is requested by parents or by teachers with the approval of the parents. Therefore, these characteristics were not available for students in the regular class.

Unit Development

The unit "Looking Your Best: Color and Line" (Appendix A, p. 33) was adapted from a unit that was previously used by the researcher in Home Economics I. The teaching method used most was discussion sessions, with repetition and visual aids as support. Learning activities (Appendix A, pp. 33-43) were also designed for individual instruction and reinforcement of discussion sessions. Also used for reinforcement was a chapter on color and line in the students' text book and a fact sheet prepared by the researcher summarizing the chapter.

The content was divided into two areas for ease in teaching and learning. First, the area of line was explored. This area was divided into three parts: (1) identification of the four basic lines, (2) effects of each line on body appearance, and (3) effects of the lines on body appearance when combined. The second area explored was color. This area was also divided into three parts: (1) colors that make the body appear larger, smaller, taller, or shorter, (2) the use of black, and (3) the use of accent colors.

Worksheet I (Appendix A, p. 33) was a personal information sheet the students used to evaluate their physical appearance and determine which colors and lines would help them achieve the appearance desired. The criteria for scoring Worksheet I was very subjective. Questions one and two asked for height and weight. Questions three and four were self-opinion questions and were scored correct if answered on the worksheet and handed in. The answers to questions five and six were based on the answers given in questions four, and were different for each student. Letter grades were given on the following criteria:

- A+ (100%) = all questions answered and correct
- A (96%) = all questions answered and basically correct
- A- (93%) = one question not answered; all others answered and correct
- B+ (91%) = one question now answered; all others answered and basically correct
- B (89%) = two questions not answered; all others answered and correct

The second learning activity, Notebook Enrichment (Appendix A, p. 33) was an exercise in finding the four basic lines in clothing and identifying the body type best suited for each line. Notebook Enrichment was scored on the following criteria: Five exercises were to be done related to each of the four lines and were worth five points each, making each of the four lines worth 25 points each; the total notebook was worth 100 points.

Worksheet II Enrichment (Appendix A, p. 33) provided an opportunity for students to select colors and lines to alter specific physical characteristics of imaginary people described on the worksheet. This learning activity was worth 100 points. Each of the seven questions was worth 14 points. Two points were given for neatness.

Instrumentation

The evaluation instrument developed by the researcher for use in this study consisted of two parts, Looking Your Best: Color and Line A (pretest - see Appendix B) and Looking Your Best: Color and Line B (posttest - see Appendix C). The posttest consisted of the same questions as the pretest, but were rearranged. The pretest and posttest were designed so that knowledge of appropriate dress that

exemplify principles of color and line could be assessed prior to and after instruction.

An outline was developed to determine the number of questions needed to represent each of the two areas identified in the unit development. A pretest and a posttest were developed by the researcher. The pretest and posttest were then evaluated by a panel of four authorities. One junior high home economics teacher, one senior high home economics teacher, one district home economics supervisor, and one EMH/psychometrist evaluated the instruments and made recommendations for changes based on their knowledge of subject matter and abilities of EMH students. Changes were made and the instruments were resubmitted to the authorities. The pretest and posttest were determined to be suitable and were duplicated for use.

The criteria for scoring the pretest and posttest was based on 100 points to equal 100 percent. Each question was worth eight and a third points.

CHAPTER IV

FINDINGS AND ANALYSIS

The purpose of the study was to seek evidence of learning by a group of EMH students towards specific learning experiences. These experiences involved a unit on color and line while participating in a mainstreamed classroom situation. The sample consisted of nine EMH students and 19 regular classroom students. The findings were grouped according to specific objectives of the study.

The first objective was to determine if EMH students could complete individual activities normally presented to regular classroom students. Students were given three learning activities to complete in a sequential order (Table II, p. 21). Each student completed the learning activities and his/her own place. No time limit was set except for normal school class periods. All of the EMH students completed Worksheet I (Appendix A, p. 33) in a time span of 20 to 30 minutes. The average completion time was 24 minutes. Four students completed the assignment in 20 minutes while two students took 30 minutes to complete the assignment. The other three completed the assignment after 20 minutes but before 30 minutes. The average percentage score for this assignment was 95. Six of the students earned the highest score of 96 percent. Only one student earned the lowest score of 89 percent.

Eight of the nine EMH students participating in the study were able to complete the second learning activity, Notebook Enrichment

TABLE II

SUMMARY OF LEARNING ACTIVITIES THAT EMH STUDENTS
WERE ABLE TO COMPLETE, THE TIME TAKEN,
AND THE PERCENTAGE SCORE EARNED

Student	Worksheet I		Notebook Enrichment		Worksheet II Enrichment	
	Completion Time*	Score	Completion Time*	Score	Completion Time*	Score
A	26	96				
B	24	96	58	69		
C	20	96	62	100		
D	20	96	50	80	7	76
E	29	96	55	56		
F	20	96	62	80		
G	30	93	56	54		
H	30	93	56	68		
I	20	89	62	80		

*Calculated in minutes

(Appendix A, p. 33). Student A started the learning activity but did not complete it. Completion time of the participants ranged from 50 minutes to 62 minutes. An average completion time was 57 minutes. Only one student took the minimum completion time of 50 minutes. Three students used the maximum time of 62 minutes. The percentage scores on the notebook enrichment ranged from 54 to 100. One student who used the maximum time of 62 minutes completed the assignment with every requirement correct. The average score for the second learning activity was 73 percent.

Only one EMH student started and completed the last learning activity, Worksheet II Enrichment (Appendix A, p. 33). Student D was able to complete the assignment in seven minutes with 64 percent accuracy.

The second objective was to compare the time required for EMH students to take the pretest and posttest and the percentage scores made on the pretest and posttest. The third objective was to identify gains or losses in percentage scores between pretest and posttests of EMH students. The time required for EMH students to take the pretest and posttest and the percentage scores made on the pretest and posttest were compared. Gains or losses in percentage scores between the pretest and posttest of EMH students were then identified. The data are shown in Table III (p. 23). One student (F) took more time on the posttest than on the pretest. Student F also gained the fewest percentage points of those that gained. Six of the nine students tested increased their posttest score by 17 to 67 percentage points over their pretest score. Two students had a decrease of percentage

points, while the score for one student remained the same. No statistical analysis was done, therefore no significance of change can be determined.

TABLE III

A COMPARISON OF TIME REQUIRED TO TAKE THE
PRETEST AND POSTTEST AND PERCENTAGE
SCORES MADE ON THE PRETEST
AND POSTTEST

Student	Completion Time*		Percentage Score		Percent Gain/Loss
	Pretest	Posttest	Pretest	Posttest	
A	9	7	42	33	-11
B	8	5	50	75	+25
C	8	6	58	42	-16
D	7	6	67	100	+33
E	7	5	25	75	+50
F	7	9	58	75	+17
G	9	7	42	67	+25
H	9	7	25	92	+67
I	7	5	50	50	0

*Calculated in minutes

Objective four was to compare the percentage scores between EMH and regular classroom students in all activities. In a comparison of percentage scores made by EMH students and regular classroom students

(Table IV, p. 25), regular classroom students scored higher in all but four cases. High scores on the posttest and the notebook enrichment for both groups of students was 100 percent. One EMH student did not complete the notebook enrichment. Low scores for both groups on the pretest was 25 percent. On Worksheet I, the low score was 89 percent for both groups. Only one EMH student completed Worksheet II Enrichment, which was computed as an average score of seven percent.

Comments of Students

Comments and actions made by students often provide evidences of learning. The comments and actions made by students during and after the experiment had no direct bearing on the specific objectives of this study. However, they do provide evidence of growing interest in the material presented and of side effects which often increase and enhance learning opportunities for students.

Day One: Two regular students stated they "made a new friend."

Day Two: Three EMH students who were active in class discussion commented that "they were having fun and it wasn't as hard as they thought it would be."

Day Four: Three regular students and three EMH students asked permission to pair up to work on their notebooks.

One week after conclusion of experiment: Four EMH students announced that they had enrolled in Home Economics I for the following year because they enjoyed their six days in the class so much. These students are currently enrolled in the researcher's class.

TABLE IV
 COMPARISON OF PERCENTAGE SCORES BETWEEN NINE
 EMH STUDENTS AND 19 REGULAR STUDENTS

	Student	Pretest	Posttest	Worksheet I	Notebook Enrichment*	Worksheet II Enrichment**
Highest Score	EMH	67	100	96	100	65
	Regular	92	100	100	100	100
Average Score	EMH	46	67	95	11	7
	Regular	58	96	98	91	84
Lowest Score	EMH	25	33	89	0	0
	Regular	25	83	89	65	60
Range of Percentage Between Highest and Lowest Scores	EMH	42	67	7	44	65
	Regular	67	17	11	35	40

*Eight EMH completions

**One EMH completion

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Passage of Public Law 94-142 has presented new problems and challenges to classroom teachers and to students involved with mainstreaming. The purpose of this study was to seek evidence of learning by a group of EMH students towards a specific learning experience while participating in a mainstreamed classroom situation.

A unit, "Looking Your Best: Color and Line," was presented to a mainstreamed class of nine EMH students and 19 regular classroom students. The unit began with a pretest covering identification of lines and effects that line and color have on selected body areas. The six day unit consisted of discussion sessions each day and learning activities done at his/her own individual pace. A posttest made up of questions identical to the pretest questions but rearranged followed the unit of study.

The objectives and findings based on those objectives were as follows:

1. To determine if EMH students can complete activities normally presented to regular classroom students. EMH students did not complete all activities normally presented to regular classroom students. All EMH students in this study completed

the first learning activity. Eight of the nine completed the second learning activity while only one completed the third learning activity.

2. To compare the time required for EMH students to take the pretest and posttest and the percentage scores made on the pretest and posttest. In the comparison of time required for EMH students to take the pretest and posttest and percentage scores made, no correlation was made. Only one student took more time on the posttest than on the pretest.

3. To identify gains or losses in percentage scores between pretest and posttest of EMH students. Gains and losses in percentage scores between pretest and posttest of EMH students were identified. Six of the nine students tested increased their posttest scores by 17 to 67 percentage points over their pretest scores. Two students had a decrease of percentage points, while one student's scores remained the same.

4. To compare the percentage scores between EMH and regular classroom students in all activities. A comparison between percentage scores of EMH and regular classroom students in all activities was made. In most cases the regular classroom student scored higher in all activities than did the EMH student.

Conclusions

From the results of the study, the following conclusions were drawn:

1. EMH students cannot complete all activities normally presented to regular classroom students in the given amount of time.

Therefore, less work should be expected, or easier adaptations of regular class work should be considered for presentation to EMH students.

2. Generally, all EMH students took less time on the posttest than on the pretest with an increased score, indicating familiarity with the material.

3. EMH students can and do gain knowledge of subject matter when in a mainstreamed classroom as evidenced by evaluation and other learning activities.

4. On the average, regular classroom students are able to score higher than EMH students in mainstreamed classrooms. However, EMH students can still achieve and should be permitted to progress as much as possible.

5. As evidenced by the increase in EMH enrollment in the Home Economics I classes following the experiment, learning opportunities for students are enhanced.

Recommendations

The following recommendations were made for further research:

1. Repeat the study using courses in a variety of disciplines with larger number of students.
2. Experiment with a variety of teaching methods.
3. Revise and analyze the instruments to determine if they are reliable and valid.
4. Increase time span of the experiment.
5. Retest at a later date for retention of subject matter by students.

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APPENDIXES

APPENDIX A

UNIT DEVELOPMENT OF COLOR AND LINE

UNIT DEVELOPMENT

LOOKING YOUR BEST: COLOR AND LINE

The color and line unit will be studied in seventh and eighth grade Home Economics Clothing I before the student chooses material and pattern for the garment she will construct. The unit will consist of a pretest, one discussion session each day, a worksheet, a notebook on line, and a posttest. During the discussion optical illusions with the line and color will be demonstrated on a flannel board. Also, combinations of line and color on paper dolls will be shown and discussed. All of this will demonstrate how color and line affect different body types.

OBJECTIVES:

Upon the completion of the unit on color and line, the student will be able to:

1. Identify the four basic lines.
2. Predict the outcome of lines on selected body types.
3. Predict the outcome of color on selected body types.

The objectives will be achieved with a proficiency of 70% or better as determined by a teacher-made test.

Unit Outline and Time Schedule

Day	Content	Learning Activities	
		Basic	Enrichment
Friday	<ul style="list-style-type: none"> I. Pre-evaluation II. Motivation--Introduction to short unit on Looking Your Best: Color and Line 	<ul style="list-style-type: none"> I. Pretest II. Short discussion on looking your best for someone special III. Assignments: <ul style="list-style-type: none"> 1. Read Ch. 10, Teen Horizons 2. Bring favorite and least favorite dress to class Monday 	
Monday	<ul style="list-style-type: none"> I. Line <ul style="list-style-type: none"> A. Identify four basic lines <ul style="list-style-type: none"> 1. Vertical 2. Horizontal 3. Diagonal 4. Curved B. Effects of line on the way we look <ul style="list-style-type: none"> 1. Vertical 2. Horizontal 	<ul style="list-style-type: none"> I. Discussion of garments assigned to bring to class--why or why not favorite? Steer discussion toward color and line II. Hand students fact sheet to be used in discussions III. Discussion using paper dolls and lines on flannel board 	

Unit Outline and Time Schedule (Continued)

Day	Content	Learning Activities	
		Basic	Enrichment
Tuesday	<p>B. Continued</p> <p>3. Diagonal</p> <p>4. Curved</p> <p>C. Combining lines for various effects</p>	<p>I. Continue discussion using paper dolls and lines on flannel board</p> <p>II. Have students try to predict outcome of line on selected body types</p> <p>III. Begin worksheet identifying:</p> <p>A. Personal information</p> <p>B. Choosing personal lines</p>	<p>I. Begin work on notebook--practice identifying line in clothing using old magazines and pattern books</p>
Wednesday	<p>II. Color</p> <p>A. To appear larger</p> <p>1. Warm colors (red, yellow, orange)</p> <p>2. White</p> <p>3. Pastels</p> <p>B. To appear smaller</p> <p>1. Cool colors (blue, green, violet)</p> <p>2. Dark, dull or grayed colors</p>	<p>I. Discussion using paper dolls and fabric swatches on flannel board</p> <p>II. Have students try to predict outcome of color on selected body types</p> <p>III. Finish worksheet identifying: choosing personal colors</p>	<p>I. Finish work on notebook</p>

Unit Outline and Time Schedule (Continued)

Day	Content	Learning Activities	
		Basic	Enrichment
Thursday	II. Continued C. To add height D. To shorten E. Black F. Accent colors	I. Continue discussion using paper dolls and fabric swatches II. Individualized practice on identifying color and line--work with paper dolls used as flash cards	I. Worksheet II: Enrichment Predict outcome of line and color on selected body types
Friday	Final evaluation	I. Permit students to ask questions before test II. Posttest III. Permit students to ask questions after test IV. Complete any individual work as time permits	Posttest with additional information included

Instructional - Learning Materials

1. Flannel Board
2. Four paper strips:
6" long
3/4" wide
Each strip with one of the four basic lines.
3. 10-15 pieces of cotton material--assorted colors--each 8" square.
4. Paper Dolls:
1 large body type
1 medium body type
1 small body type
and clothes:
A large variety of color and line combinations.
5. Worksheet
6. Large selection of old magazines and pattern books.
7. Fact Sheet
8. Related Text: Teen Horizons--Chapter 10
MacMillan Publishing Co., Inc.
9. Pretest and Posttest

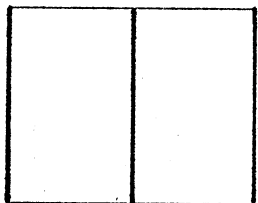
Fact Sheet

I. Line

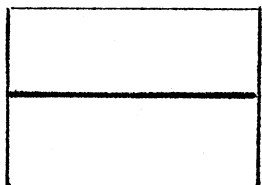
- A. Four Basic Lines
 - 1. Vertical
 - 2. Horizontal
 - 3. Diagonal
 - 4. Curved
- B. Vertical Lines
 - 1. Creates a feeling of height
 - 2. Usually thin
 - 3. Affects silhouette
 - 4. Can affect width depending on placement
- C. Horizontal Lines
 - 1. Creates a feeling of width
 - 2. Can affect height depending on placement
- D. Diagonal Lines
 - 1. Can suggest movement
 - 2. The more vertical the diagonal, the more slenderizing
- E. Curved Lines
 - 1. Create gracefulness
 - 2. Usually widens and softens
- F. All lines can be combined, but usually one will be dominant. The eye follows the dominant line.

II. Color

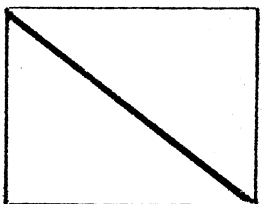
- A. To appear larger
 - 1. Warm colors (red, yellow, orange)
 - 2. White
 - 3. Pastels
- B. To appear smaller
 - 1. Cool colors (blue, green, violet)
 - 2. Dark, dull, or grayed colors
- C. To add height--one color in a one piece garment
- D. To shorten--a two-piece garment with two colors
- E. Black emphasizes silhouette--whether it is good or bad.
- F. Accent colors can be used to attract attention to best features.



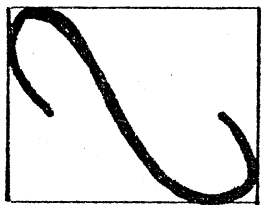
VERTICAL



HORIZONTAL



DIAGONAL



CURVED

Worksheet I
Personal Information

1. Your height _____ 2. Your weight _____
3. Circle the words that describe you:
 - short and thin
 - short and fat
 - short and average
 - tall and thin
 - tall and fat
 - tall and average
 - big in the middle
 - big in the hips
 - big shoulders
4. Circle the words that tell how you would like to look. (You may add to the list.)
 - taller
 - shorter
 - thinner
 - fatter
 - bigger in the waist
 - smaller in the waist
 - larger hips
 - smaller hips
 - larger shoulders
 - smaller shoulders
5. What COLORS would you choose to make you look the way you marked in question four?
6. What LINES would you chose to make you look the way you marked in question four?

Looking Your Best
Notebook

Using magazines and old pattern books, find three examples of the following lines in clothes. Mount each example neatly on a separate piece of paper. Label with the correct line and identify the body type for which the example is best suited.

1. Vertical
2. Horizontal
3. Diagonal
4. Curved

Worksheet II

Enrichment

The people listed below have physical characteristics that they do not like. Follow the directions and tell how they could improve the way they look.

1. Mary is very short and thin.
 - a. What colors can Mary choose that would make her look taller and fatter?
 - b. What lines can she choose to make her look taller and fatter?
2. Bob is average height, but has a very big middle.
 - a. What colors would make Bob look smaller in the middle?
 - b. What lines should Bob choose to make him look smaller in the middle?
3. Sue is tall and thin. She has acquired the nickname "Beanpole."
 - a. What colors could Sue choose to make her look shorter and heavier?
 - b. What lines can she choose to make her look shorter and heavier?
4. Paul is very short and heavy-set.
 - a. What colors would make Paul look taller and thinner?
 - b. What lines would make Paul look taller and thinner?
5. Cathy is very tall and has a ver nice figure.
 - a. What colors should Cathy choose to make her look shorter?
 - b. What lines would make Cathy look shorter?
7. Mike is very tall and very heavy.
 - a. What colors could Mike choose to make him look shorter and thinner?
 - b. What lines would make him look shorter and thinner?

APPENDIX B

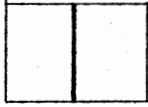
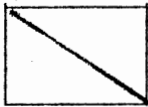
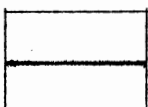
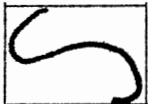
PRETEST

Name _____

LOOKING YOUR BEST:

COLOR AND LINE (A)

Draw a line connecting the picture with the word that best tells what the picture is.

- | | | |
|----|---|------------|
| 1. |  | Curved |
| 2. |  | Horizontal |
| 3. |  | Vertical |
| 4. |  | Diagonal |

Lines change how our body looks. Which answer shows the change that takes place when the four lines are used? Circle the letter in front of the correct answer.

1. Diagonal lines
 - A. Create a feeling of width
 - B. Can suggest movement
 - C. Affects shape
2. Curved lines usually
 - A. Slenderize
 - B. Create gracefulness
 - C. Widens
3. A single vertical line
 - A. Creates gracefulness
 - B. Can suggest movement
 - C. Creates a feeling of height
4. A single horizontal line
 - A. Creates gracefulness
 - B. Slenderizes
 - C. Creates a feeling of width

Page 2

Colors change how our body looks. Which answer shows the change that takes place when colors are used? Circle the letter in front of the correct answer.

1. The color white tends to
 - A. Add width to a person
 - B. Make a person appear larger
 - C. Make a person appear smaller
2. The color black tends to
 - A. Add height
 - B. Emphasize shape
 - C. Make a person appear larger
3. Warm colors (red, yellow, or orange) tend to
 - A. Add width to a person
 - B. Add height to a person
 - C. Make a person appear larger
3. Cool colors (blue, green, or violet) tend to
 - A. Add width to a person
 - B. Add height to a person
 - C. Make a person appear smaller

APPENDIX C

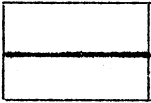



POSTTEST

Name _____

LOOKING YOUR BEST:

COLOR AND LINE (B)

Draw a line connecting the picture with the word that best tells what the picture is.

- | | | |
|----|---|------------|
| 1. |  | Curved |
| 2. |  | Horizontal |
| 3. |  | Vertical |
| 4. |  | Diagonal |

Lines change how our body looks. Which answer shows the change that takes place when the four lines are used? Circle the letter in front of the correct answer.

1. Diagonal lines
 - A. Affects shape
 - B. Creates a feeling of width
 - C. Can suggest movement
2. Curved lines usually
 - A. Widen
 - B. Slenderize
 - C. Create gracefulness
3. A single vertical line
 - A. Creates a feeling of height
 - B. Creates gracefulness
 - C. Can suggest movement
4. A single horizontal line
 - A. Creates a feeling of width
 - B. Creates gracefulness
 - C. Slenderizes

Page 2

Colors change how our body looks. Which answer shows the change that takes place when colors are used? Circle the letter in front of the correct answer.

1. The color white tends to
 - A. Add width to a person
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 - C. Make a person appear smaller
2. The color black tends to
 - A. Emphasize shape
 - B. Make a person appear larger
 - C. Add height
3. Warm colors (red, yellow, or orange) tend to
 - A. Add height to a person
 - B. Make a person appear larger
 - C. Add width to a person
4. Cool colors (blue, green, or violet) tend to
 - A. Add height to a person
 - B. Make a person appear smaller
 - C. Add width to a person

/
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