Correlation of art as a means of developing skills in the content areas for the educable mentally retarded on the intermediate level

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THE CORRELATION OF ART AS A MEANS OF DEVELOPING
SKILLS IN THE CONTENT AREAS FOR THE
EDUCABLE MENTALLY RETARDED ON
THE INTERMEDIATE LEVEL

by

Sister M. M. de Pazzi Andry, S.S.F.

A Research Paper
Submitted in Partial Fulfillment of the
Requirements for the Degree of
Master of Arts in Education
(Education of Mentally Handicapped)

At the Cardinal Stritch College
Milwaukee, Wisconsin
1971
This research paper has been approved for the Graduate Committee of the Cardinal Stritch College by

Sister Joanne Marie Kistner
Adviser

Date: Mar. 4, 1971
TABLE OF CONTENTS

Chapter

I. INTRODUCTION ........................................... 1

  The Problem ............................................. 2
  Definition of Terms Used ................................. 3

II. REVIEW OF THE LITERATURE .............................. 4

  General Characteristics ................................. 5
  Self-Development through Art ............................ 13
  Correlation of Art Activities ............................ 28
  Art and Craft Projects ................................ 40

III. SUMMARY AND CONCLUSIONS ............................. 43

BIBLIOGRAPHY ............................................... 45
# LIST OF TABLES

<table>
<thead>
<tr>
<th>Table</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Mental Age and Cues to Educational Planning</td>
<td>9</td>
</tr>
<tr>
<td>2. Approximate Mental Age, by Half-Year Intervals, from IQ and CA</td>
<td>9</td>
</tr>
</tbody>
</table>
CHAPTER I

INTRODUCTION

"With awareness of limitations
Appropriate goals can be set."
(G. Jenkins)

It has become increasingly evident to many teachers who work with the educable mentally retarded that effort must be made to stimulate the child's curiosity about his environment so that he may put his creative imagination to work.

All children have a natural impulse to activity and the Educable Mentally Retarded is no exception. Because the educable mentally retarded child's chief impulse to activity is manipulative, and because he lives essentially in a verbal society, the child must communicate in a language based upon the ability to utilize ideas and concepts. These native impulses when intelligently guided can lead a child to acquire valuable experiences and desirable social habits. It is, therefore, imperative that the curriculum be arranged for a balance in constructive activities in relation to the academic areas of concentration.
One of the finest ways of providing for that change is through arts and crafts projects. Every area in the curriculum offers opportunity to apply what is gained in an art program; for art as a constructive activity has communicative values as well as social implications.

The Problem

Statement of the Problem

In this paper the writer has shown how recent developments have supplied some interesting and useful approaches toward a theory of the psychology of art as a means of developing skills in the content areas of the curriculum for the Educable Mentally Retarded on the intermediate level.

Purpose of the Study

The purpose of the study is to ascertain factors related to the nature of the child; characteristics associated with the conditions of mental retardation; self-development through art, and the correlation of art activities with the units and activities in other subjects.

By so doing, the writer feels that the basic needs of the Educable Mentally Retarded will be better satisfied within a regular classroom situation.
Definition of Terms Used

The President's Panel on Mental Retardation used this definition of mental retardation in 1962. It reads:

Mental Retardation is a condition resulting from a basic abnormality of the human mind. It refers to the lack of intellectual ability resulting from arrested mental development. It interferes with the ability to adjust to the demands of environment. It manifests in poor learning, inadequate social adjustment and delayed achievement.¹

Educable Mentally Retarded is an educational classification in mental retardation used to describe a person who although subnormal in intelligence is capable of some success in academic subjects.

Curriculum is a plan for the arrangement of information on experiences which educators consider necessary for children to cope fully with life situations.

Art Curriculum is a means of expression by which the mentally retarded is aided in making concepts and ideas more meaningful.

Intermediate Class, children ranging from chronological ages of nine years, four months, to thirteen years, six months.

CHAPTER II

REVIEW OF THE LITERATURE

The problem of helping the educable mentally retarded child to achieve skills commensurate with his innate ability is still a challenge to many concerned teachers.

In the past, it was an accepted fact that art played an important role in developing the manipulative skills of the Educable Mentally Retarded. Articles and books published within the past fifty years reflect an interest in the creative aspect of mental disorders. Art works have been used to reveal the child's intellectual level on a nonverbal basis very successfully, and have opened new avenues of discovery through this medium.

More recently, research is focusing on the correlation of other subjects as a basis for children's art work. A summary of the findings, though limited, will be given together with an overview of the nature and characteristics of the educable mentally retarded child.

The first of this grouping will review general characteristics of the mentally retarded. This will be followed by
the psychological aspects of self-development through art, and lastly, the study of techniques in developing correlations between art and certain other subjects.

**General Characteristics**

The learning of retarded children is influenced by factors related to their experience as well as by characteristics associated with the conditions of mental retardation itself.

Erdman states that an essential aspect of mental retardation is the disparity between the physical or chronological age of the retarded child and his intellectual or mental development. He further noted the importance of a complete study of the child by a team including parents, teachers, psychologists, nurses, physicians, clergymen, and social workers. The medical, intellectual, social, emotional and educational aspects are explained, and the author points out that diagnosis of the mentally retarded involves much more than I.Q. scores.

It was indicated that the Educable Mentally Retarded are more prone to illness and have greater incidence of physical handicaps. However, the physical development of retarded children parallels that of any comparable group of children except that the rate of development may be slightly
slower. These attributes have varying degrees of significance for planning educational programs. Therefore, a knowledge of physical handicaps is definitely significant because a child may need to be placed under medical care; given some form of therapy, or the teacher may have to employ special educational techniques to facilitate more effective learning.¹

Malinda Garton, in speaking of the physical maturation of the mentally retarded, maintains that the emotional needs and pressures of the mentally retarded and the normal child are similar. However, "because the retarded child has a limited vocabulary for verbal expression, his feelings become crowded with repressions and frustrations." Consequently, his emotional problems are often greater, and he needs consistent daily help in attaining manipulative skills.²

Further investigation reiterated similar findings, and Johnson and Cruickshank reported that few studies available defined groups poorly, and made no definition other


than the fact that they were housed in a training school. There was no interpretation in regard to a specific group of retarded children.

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.3

Looking at the intellectual aspect it has been observed that the sequential pattern of development in the retarded is very similar to that of children of higher intelligence but of course slower. The difference between the chronological and mental ages of the retarded is much greater than that of normal children. The relationship of the educable mentally retarded is intellectually, at least two years behind a chronological age of 6-0, and at least six years behind the chronological age of 18-0. This has major importance with respect to program objectives and the selection of materials. Yet, the teacher must keep in mind that mental age is not a final and absolute determiner of the extent to which a child will achieve.4 The final decision should be


based upon a composite study of the whole child.

Erdman, together with Skeels, Skodack, Dye and Wellman, established through research that I.Q. is not the sole determinant and cannot be fixed or predetermined. Retarded children learn best through meaningful experience and will have most success in learning concepts and information of a concrete nature as opposed to abstractions. Meaningful repetition is required in verbal areas, and their attention span requires short periods of instruction.\(^5\)

In an effort to enable teachers to determine an established realistic expectancy for the mentally retarded in school achievement, Birch and Stevens developed two tables. Table I shows the Mental Age and Cues to Educational Planning. Table 2 shows the approximate mental age by half year intervals from the I.Q. and the chronological age.\(^6\)

Mental ages obtained from the group test results following could probably be rounded off to the nearest half year and then used as rough approximations for guidance as they are not precise or exact measures. Table 1 will supply cues for educational planning in terms of a child's mental age.

\(^5\)Erdman, \textit{op. cit.}, p. 9.

TABLE 1
MENTAL AGE AND CUES TO EDUCATIONAL PLANNING

<table>
<thead>
<tr>
<th>Age</th>
<th>Activities Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>3 yrs</td>
<td>Nursery school activities</td>
</tr>
<tr>
<td>4 yrs</td>
<td>Transition from nursery school to kindergarten activities</td>
</tr>
<tr>
<td>5 yrs</td>
<td>Kindergarten activities</td>
</tr>
<tr>
<td>6 yrs</td>
<td>Reading readiness activities and transition to beginning reading</td>
</tr>
<tr>
<td>7 yrs</td>
<td>First grade activities, with home and family living emphasized</td>
</tr>
<tr>
<td>8 yrs</td>
<td>Second grade activities, with emphasis on knowledge of local community</td>
</tr>
<tr>
<td>9 yrs</td>
<td>Third grade activities, with introduction to occupations</td>
</tr>
<tr>
<td>10 yrs</td>
<td>Fourth grade activities with re-emphasis on home and family living responsibilities</td>
</tr>
<tr>
<td>11 yrs</td>
<td>Fifth grade activities, emphasizing community and national citizenship skills</td>
</tr>
<tr>
<td>12 yrs</td>
<td>Sixth grade activities with vocational experiences</td>
</tr>
</tbody>
</table>

TABLE 2
APPROXIMATE MENTAL AGE, BY HALF-YEAR INTERVALS, FROM IQ AND CA

<table>
<thead>
<tr>
<th>IQ*</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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<td>3-6</td>
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<td>9-6</td>
<td>10-0</td>
<td>11-0</td>
<td>12-0</td>
<td>13-0</td>
</tr>
</tbody>
</table>

*The IQ nearest to that of the child.
Table 2 provides a useful technique for estimating the mental age to the nearest half-year.

Birch concludes:

When the child's approximate mental age is used to provide cues to educational planning, it is particularly important that the teacher keep in mind that mental age is not a final and absolute determiner of the extent to which a child will achieve. When combined with the other ingredients which go to make up the child's personality, it can be very helpful. It is advisable to teach the child in terms of his present achievement. If present achievement is close to what should be expected, the teacher can be satisfied that a good educational job is being done. If present achievement is markedly below what the child's mental capacity would indicate to be appropriate, the teacher knows where to aim. 7

To observe children with insight, to diagnose their abilities and needs takes skill, time and knowledge. Kirk and Johnson emphasize the need for adequate diagnosis if a sound educational program is to be developed. The study would include a social history, a medical examination and the results of a number of tests; verbal and performance intelligence tests, achievement tests, social and personality tests, and any other tests needed for adequate diagnosis. 8

In addition to acquiring this type of information the teacher must also help the mentally handicapped child

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7 Ibid., p. 23.

to form habits and patterns of behavior that will facilitate his adjustment to his social environment.

The child should be aided in understanding his position in the home, his responsibilities and his relations with the various members of the family. A similar effort should also be made to aid him in his social adjustments with the children and adults of the neighborhood, school and community.9

There is a small but rapidly expanding accumulation of data which indicate that behavioral principles, reliably demonstrated in learning laboratories are also applicable to managing, modifying, building, and maintaining the behavior of children who function in special education classrooms (Haring and Phillips, 1962; Bijou, 1964). The fundamental concept upon which these principles rest is that behavior, abnormal as well as normal, is learned.10

Siegel adds that children often misbehave because they are rejected and are led to reject themselves. The process of socializing is highly complicated and with the handicapped specific instruction is necessary. He suggests the use of success-assured activities; assignments to tasks requiring responsibilities; use of praise; avoidance of

9Ibid., p. 188.

negative value judgments; and appeal to correct attire; suitable posture, and attention to personal hygiene.

Other techniques are enumerated that will help to improve the child's self-concept; train in communication, and develop social-recreational skills. Siegel concludes the chapter with a resume on the importance of the sequential approach which encourages a one-to-one relationship before group socialization.\textsuperscript{11}

We must never forget that the child is potentially a much higher being than we have hitherto imagined and we must always treat him as such. This means that we must present the elements of culture to him, not in any low or mechanical way, but in a manner which corresponds to this newly revealed and more elevated nature.\textsuperscript{12}

Although many attempts are made to attribute to specific and unique characteristics to the retarded, a more probing analysis indicated that the differences observed between them and normal children are mainly of degree rather than in kind, for as with all children, each retarded child is unique.\textsuperscript{13}

\begin{footnotesize}
\begin{enumerate}
\item\textsuperscript{11} Erne\textsuperscript{t} Siegel, Special Education in the Regular Classroom (New York: The John Day Co., 1969), pp. 84-103.
\item\textsuperscript{13} Erdman, \textit{op. cit.}, p. 8.
\end{enumerate}
\end{footnotesize}
Perhaps the best way to get to know a child is the day-by-day study of him and his behavior. The task of understanding and teaching would be greatly simplified if the teacher could separate the child into his components and deal with them one at a time. But this is not possible for the whole or total child brings with him each day his physical, emotional, social and intellectual needs.

Physically he needs to feel comfortable and healthy with plenty of space in which to move around.

Intellectually, the child needs to have stimulating activities which lead to the motivation of learning.

Socially he needs to have happy experiences and grow in his ability to do things for himself and for others. And emotionally he needs to feel loved and wanted, secure and unhurried with some degree of happiness.¹⁴

Self-Development through Art

It was indicated in the preceding review of the characteristics of the educable mentally retarded that these children learn more readily from concrete materials than from lectures or explanations. "They are geared to handle

¹⁴Mildred Packman, Activities through the Year for Young Children with Moderate Mental Retardation (Baton Rouge, Louisiana: State of Louisiana State Department of Hospitals, 1969), p. 5.
an object, to see it, to taste it, to smell it, in order to
know and understand anything about it.\textsuperscript{15}

Packman reinforces this fact by stating that learning is more than acquiring academic skills—it involves developing many skills, building habits, and forming attitudes and concepts. This kind of learning, she continues, is achieved by doing, thus adding to the child's life experiences. For like other children, retarded children learn through their senses by feeling, tasting, smelling, seeing and hearing. Learning is achieved more slowly with these children. Therefore, patient meaningful repetition must be practiced by those who hope to teach them.\textsuperscript{16}

Using the premise that "Human reason finds expression not only in language and mathematics but also in various constructive activities,"\textsuperscript{17} and realizing that the difficulty the Educable Mentally Retarded faces in dealing with abstractions, especially verbal abstractions, it would seem that one of the finest ways of providing for a change in pace from academic to constructive activities is through art.

\textsuperscript{15}Garton, \textit{op. cit.}, p. 200.

\textsuperscript{16}Packman, \textit{op. cit.}, p. 12.

It is this graphic avenue of expression and not the verbal that allows the mentally handicapped child self-esteem and satisfaction, two invaluables in life that make for a happier human being. It is through creative experience that the child takes things in his environment, sees them, works with them, and then shapes them in his own image. Creative expression enhances meaning and many times gives meaning to the facts and things of the world--clay becomes pottery and statues, words become story and poetry, and man acquires a new, higher and more personal dimension.18

Barlow maintains that for a child in special education, creative art activity can be a vital means of emotional release and leads to greater social growth. "Creative expression is needed as an outlet for personal ideas and inspiration of the retarded person when he cannot formulate these ideas in words or sentences."19

The mere fact that the child has the opportunity to manipulate media is of significance, and forces those interested to look at the programs for the emotionally mentally retarded and clarify values with regard to who is taught, what is taught, and how it is taught. Art is a most feasible way of recording self-experience and of providing opportunities to communicate with others. The implications of art


education are psychologically sound, and properly understood will foster mental, emotional and social development. 20

Rapport in making a similar observation concluded that "A retarded intelligence does not necessarily prevent the development of the creative potentialities of the child." He demonstrated this through studying samples of art by children in institutions for the retarded all over the world. Most of the art was done by children with intellectual quotients ranging from 50 to 80 and a number whose I.Q. was from 20 to 50. The works were of exceptional quality. The art critics were impressed with the artistic value, and the esthetic level illustrated the paradox of an artistic gift existing alongside a low mental development. 21

Obviously, intelligence tests have left unexplored a whole area of human capacity which needs to be tapped, both for the edification of others and the personal development of the less fortunate, whose inadequate language cuts them off from normal communication. 22

The author continues--

The art production of retarded children seems to be a good demonstration of a non-verbal expression at

20Ibid., p. 30.


22Ibid., p. 16.
a high level of achievement, while the verbal development remains low. Further research into the non-verbal intelligence of the mentally retarded should be of far-reaching interest, and may point to a new avenue of education.\textsuperscript{23}

Perhaps the movie, \textit{Painting is Loving}, in which the paintings and the art work of retarded children were shown in Los Angeles, is the break-through needed. Some of the paintings now hang in the American Embassy in Paris, but more important, a few of these children considered "uneducable" have been graduated to classes in the public schools, or to jobs. Self-confidence, and the ability to cope with a complicated world were gained through art. The paintings added proof to an optimistic philosophy which recognizes the potential of the most severely retarded, and maintains that much can be done with patience and imagination.\textsuperscript{24}

Recent discoveries indicate the impact art has had not only as therapy for children suffering from various psychoses, but the recent success of the Head Start program lends support to the value of the psychology of art in general and art education of the Educable Mentally Retarded in particular.

\textsuperscript{23}\textit{Ibid.}, p. 17.

Sister M. Helena aptly describes art as a visual language that can be understood by children as they respond to beauty in God's created world and in man's works. The child must be trained to a sense of appreciation. He must be encouraged to see the color and the light, the detail and the pattern, the whole and its parts. "Thus, he is stimulated to think creatively, to plan, to attempt, to evaluate, to choose, and to work with others--an excellent opportunity to achieve his own basic wholeness."25

Beginning with Ruskin in 1857 to the present day, the significance of children's drawings has been discussed. Gaitskell reported that Sully, one of many, dealt with several aspects of the child's mind, and when looking at the child as an artist, he traced a typical line of development from selected drawings.26

Read in his book, The Art of Children, gives us the benefit of much research on the nature of the child and the attitudes a teacher must bring with the knowledge she has.


In the same book reference is made to a passage from one of Dr. Montessori's books concerning "graduated exercises in drawing," leading up to an artistic creation.

Dr. Montessori states that drawing comes to satisfy a need for expression, as does language, and almost every idea may seek expression in drawing. If the drawings are free, and if the child is free, he will perfect himself in the assimilation of his surroundings and will create and express himself.

To confer the gift of drawing we must create an eye that sees, a hand that obeys, a soul that feels; and in this task the whole life must cooperate. In this sense life itself is the only preparation for drawing. Once we have lived, the inner spark of vision does the rest.  

Gaitskell agrees that expression in art relies upon both the unique personal qualities of its creator and the experience he has had in life.

Since children neither possess identical personalities nor react in wholly similar fashion, to experience their output in art must of necessity vary. Nevertheless, at certain periods of their general development, children

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28 Ibid., pp. 113-114.
tend to pass through several stages of artistic production, and consequently adopt recognizable modes of artistic expression.

Therefore, it is highly desirable that a teacher be familiar with the developmental stages of expression which a child has reached. This guide will give clues not only to type of subject matter which may interest him but also the tools, materials, and activities which he may cope with successfully. Knowing his stage of expression, furthermore, will help the teacher to determine what kind of stimulation, assistance, and general educational treatment is required for development.29

The following schema will give the teacher some idea of the stages through which the child passes. Activities should be related to the functioning levels of the child.

The ages referred to on the schema are chronological ages of average children. This would imply that the mental and chronological ages of these children are the same. Children in special education classes are generally two to four years retarded in mental growth. This must be considered when using the ages shown on the development chart following.

29Gaitskell, op. cit., p. 125.
STAGES OF DEVELOPMENT IN THE FIELD OF ART

A. The First Stages of Self-expression

Scribbling Stages (2 to 4 years)

1. Disorderly scribbling
   a. Uncontrolled lines on paper
   b. Should never be interrupted

2. Controlled scribbling

   Child not capable of motor coordination tasks such as eating, dressing, etc.

3. Naming of scribbling

   Connects meaning with his scribbling

4. Clay good for use during scribbling stage
   a. Beating corresponds to disorderly
   b. Breaking into pieces corresponds to controlled
   c. Saying lump of clay is airplane, etc. is equal to the naming of scribbling

b. First Representational Attempts

   Preschematic Stage (4 to 7 years)

1. Child now ready to build up new concepts of form, to enrich his form symbols

2. First development of representative symbols

3. A representative symbol consists of geometric lines, which when isolated from the whole lose meaning
4. First relationships of color determined by emotional qualities appear

C. The Achievement of a Form Concept

Schematic Stages (7 to 9 years)

1. A pure schematic representation is a representation with no intentional experiences represented

2. The human schema is the form concept of a man at which the child has arrived and which he repeats again and again whenever no intentional experiences influence him to change his concept

3. Introduction of base line

4. Draws X-ray pictures when inside represents more, emotionally, than does the outside

5. Clay good at this time

D. The Dawning Realism

The Gang Age (9 to 11 years)

1. Greater awareness of self

2. Confidence in own work shaken by the significance of environment

3. Space between base lines has meaning

4. Introduction of crafts from decoration—only standpoint

E. The Pseudorealistic Stage

The Stage of Reasoning (11 to 13 years)
1. Preparatory stage to the approaching crisis of adolescence

2. Intelligence of adult-emotions of child

3. Visually minded child concentrates more on the whole

4. Non-visually minded child concentrates more on details

5. Beginning awareness of proportion

F. The Period of Decision

The crisis of adolescence as seen in creative activity

1. Representation more related to reality

2. The method of art is good as it brings out the innate qualities of an individual by developing self-confidence and the desire to go ahead.30

In understanding the retarded child, the teacher is better able to organize a program that will take into consideration muscular development, the eye-hand coordination, social growth and maturity.

Schmidt gives some idea of what a child should be able to do in craft projects at their age levels.

Skills which follow are on the primary and intermediate levels.

WHAT THE CHILD SHOULD BE ABLE TO DO

Primary
Ages Seven to Nine

1. Draw a simple design or picture.
2. Color in a picture with crayon.
3. Cut out a large picture with scissors.
4. Draw a straight line, circles, and simple patterns which are large and easy to follow.
5. Roll, pound and push out forms with clay.
6. Saw a piece of wood.
8. Shellac or varnish a finished product.
9. Sand down a piece of wood.
10. Paint large pictures with tempera and brush.
11. Paste objects on paper.
12. Paint pictures with watercolors.
13. Make murals and posters with chalk.
14. Drill a hole.
15. Do simple weaving with a loom.
16. Block print with tempera and materials such as potatoes and sponges.
17. Tool certain metals such as thin sheets of copper and aluminum.
18. Paint objects with tempera or poster paints.
19. Do finger painting.
20. Paint at an easel or on a table.
21. Use papier-mache to make different projects.
22. Glue projects together, as in woodworking.
23. Fold paper.
24. Do simple stenciling.

**Intermediate**

Ages Ten to Fourteen

1. Use hand and coping saws.
2. Thread and use a needle correctly.
3. Cut various objects with scissors and shears.
4. Do large papier-mache projects, such as animules.
5. Tool copper and aluminum sheets.
6. Mount copper and aluminum sheets on wood.
7. Measure woodworking projects with a ruler.
8. Use tempera, poster, and enamel paints.
9. Handle all types of brushes.
10. Use finishing materials, such as shellac, varnish, and lacquer.
11. Hammer all sizes of nails into wood.
12. File a piece of wood.
13. Draw straight lines, circles, squares, and other intricate designs.
14. Make large murals and posters with colored chalks or poster paints.
15. Roll clay, and form over a mold.
16. Finish clay pieces with glazes.
17. Enamel on copper to make earrings, cuff links, and medallions.
18. Work on small wooden looms in weaving projects.
19. Use crayola, watercolors, and colored chalks.
20. Work on all types of drawing paper.
21. Stencil on cloth.
22. Cut a linoleum block.
23. Print a linoleum block on paper.
24. Make use of reed material in basket weaving.
25. Put together objects to make mobiles.
26. Make a pattern.
27. Trace around a given pattern.
28. Mix tempera and poster colors for desired effects.
29. Manipulate cord, masking tape, yarn, and thread.
30. Do simple braiding with cord.
31. Make designs and pictures.
32. Paste various materials to objects, such as wallpaper, to make a notebook.
33. Mix plaster of paris to proper consistency.
34. Do a simple silk-screen process.
35. Inlay mosaic tile.
36. Do batik.
37. Do simple carving activities.
38. Paint on glass and textiles. 31

Since the mentally handicapped child lacks the creative ability of the average child, his activities should be somewhat directed at the beginning. As he learns to handle various media and develop his imagination, he will need only the equipment and time available to him to thoroughly enjoy and gain from all activities in other areas. 32

If there is clear identification and proper sequencing so that the retarded are not forced to make too great conceptual steps, the urge to express ideas and emotions is possible with a well planned art curriculum.

Man is not only a thinker and speaker but also a maker. He fashions objects of beauty and use. He employs

tools to do what his unaided hands cannot accomplish. He invents and builds. He puts his creative imagination to work in conceiving and embodying ideas in a variety of material forms. It is to supply these basic human needs that programs of arts and crafts are included in the curriculum.33

This calls for a reexamination of the philosophies of how and why children learn and what role art plays in the development of other content areas in the curriculum.

In this section an attempt will be made to show how art activities can be correlated with the units and activities in other subjects.

The writer realizes that research findings are very limited. However, enough has been written to indicate that this approach has merit and should encourage studies in creative teaching of the Educable Mentally Retarded, and ultimately provide for modifications in the curriculum and teaching methods.

Correlation of Art Activities

For many decades, research in child art has been significant. In the beginning, pictures were studied as curious phenomena; later they were interpreted as expressions of children's emotional and imaginative life. In recent years, child art has come to be used as an instrument

33Phenix, op. cit., p. 9.
with which to gain a greater understanding of the child's personality, and more recently, art is being used as a projective technique in classroom teaching. 34

If teaching is not geared to develop mental needs it is wasted. Time must be provided for children to experiment with new techniques and ideas and to explore their possibilities. It is important to let the child discover solutions to problems for himself. 35

It has been shown through studies that art need not be relegated to teaching the appreciation of drama, music and painting. Nelson states that art is also a most effective tool as a medium of expression and communication. It aids children to learn reading, writing, arithmetic and other academic subjects.

In the book entitled Instructional Aids, concrete examples are given in the various subject areas. Some of the projects can easily be correlated into the curriculum for they stimulate thought, promote understanding, and encourage the teacher to use her own creativity while developing the creativity of the children. 36


Baumgartner and Shultz are convinced that a child can be reached through art in a climate and with a program that reflects personalized methods of teaching that allow concepts to grow and flourish. By understanding the way a child sees, feels, comprehends, interacts, and grows in a changing society, the teacher finds out what to expect and where to begin planning.  

Art activities—"drawing" and "construction"—won their place as a regular part of the elementary school curriculum during the late nineteenth century as a form of sensory and mental training and as a means of grasping and representing the objective world.  

The trend moved toward vocational training and by the 1930's, art educators became convinced that their subject could be used for a wider range of children. "Lowenfield demonstrated that a natural progress in art work, plus concomitant intellectual, emotional, and social growth could be assured if sufficient time were given for creative involvement."  

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Methods of educating mentally handicapped children have been developed by numerous individuals each with a different emphasis. But the common elements in these methods all include an attempt (1) to adapt the instruction to the slow learning ability of the children, and (2) to make the program practical and less academic. 39

On the intermediate levels, since stress is placed (1) on the development of skills in the tool subjects, and (2) experience in areas of living, it is thought that art activity can be used profitably with the educable mentally retarded child as he learns to find himself and develops a positive self image. "Art should be used as a method of expression in correlation with other class activities." 40

**Language Arts**

As an aid to reading, art may be used to lead the child to many satisfying experiences since reading is the most difficult of all subjects for the retarded.

Cruickshank observed that the educable retarded usually are capable of achieving high third or low fourth grade reading ability. 41 A low level, no doubt, but

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39 Kirk and Johnson, op. cit., pp. 112-113.

40 Ibid., p. 303.

41 Cruickshank, op. cit., p. 216.
sufficient to acquire information that will give the child an understanding of the society in which he lives.

Armed with at least the basic reading skills, the teacher has an opportunity to reinforce and extend those skills through art.

Darby and Hornaday in the *Time Machine Series* correlates the art program with the reading lessons. There is an art project specifically designed to introduce each phase of the program. The projects can be completed by the child independently, and allow individual preference as to decoration and detail. The final art project for each book is a large drawing to integrate and test the comprehension of the story. All of the details and events that are remembered are discussed, and most of all, enjoyed. Each project has suggestions for the teacher and materials are listed that are needed in constructing various art objects related to the lesson.

The high interest, easy-to-read books; the records designed to cement good reading habits, and the art projects executed to develop word learning, knowledge, and comprehension, all tend to allow for individual self-expression.  

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Since the incidental language development of normal children cannot be assumed for the retarded child, language proficiency has high priority.

One of the most prominent characteristics of the retarded child is his language limitations, which is revealed by poor articulation, limited vocabulary, inadequate language patterns and the inability to communicate ideas. Language proficiency, is therefore, preliminary to success in all school activities.

Erickson suggests the use of simple puppets and marionettes to foster a stimulating medium for language participation. Puppets may be used for free play activities as assistants who take the speaking parts as the teacher tells a story, or they may be used in the presentation of an actual stage performance. In any capacity they provide motivation and help to relieve the fear of speaking before an audience.

Retarded children can usually participate better if their lines are repetitious. As they gain confidence, they may be able to add lines of their own creation. The construction of puppets, stage and costumes, a form of art, will also encourage an exchange of ideas.43

Gaitskell, in speaking of experiences in the language arts that may lead to strong correlations with art, lists various media. He speaks of the use of stories and poems as a means of encouraging children in the symbol or later stages of expression to make two and three-dimensional illustrations. Puppetry and other theatre arts, he continues, will demand the use of English, spoken in a natural, functional setting. However, precaution must be observed. He warns, "only when the literary work has aroused the child to the extent that he strongly wishes to express something about it, is the vicarious experience a suitable subject for art."44

Another technique used by many teachers is the "flash card," a familiar form of pictorial material.

Teachers have made use of flash cards with whole meaningful sentences or questions to challenge the mentally alert as well as the retarded. Flash techniques tend to develop speed in drill subjects, and they encourage a child to quicken recall. Retarded pupils can make flash cards, thus, reinforcing word and picture recognition skills while providing an opportunity to develop skills in coordination.45

45Nelson, op. cit., p. 40.
Continuing this phase relating to motor skills, handwriting is also helpful in transmitting an idea, a thought, or a message to a particular concept which is being expressed. "With the retarded child, this activity is usually successful, for the reason that handwriting is a motor skill related to physical maturation and coordinating ability." Also, "Retarded children have great need for learning skilled handwriting. It gives them a taste for sorely needed success and serves as a powerful reinforcement to all other learning that makes use of writing by hand." 

Arithmetic

It has been noted that the educable mentally retarded child is an individual personality with low functional reading ability, yet he can learn to read numbers, count and even operate with numbers. The problem most teachers face is how to teach arithmetic concepts.

The mentally retarded child needs many meaningful experiences with numbers before he is ready to handle simple problems. Every classroom activity in which a number situation arises can be made a part of his experience. His ideas


of number values should be systematically built up out of his immediate environment, and should be based upon objects he can handle. The child grows in his ability to do mathematical thinking by beginning with the manipulation of concrete materials, then by using pictures and semi-concrete materials, and eventually by using abstract symbols. 48

The teacher should provide specified times in classes at the intermediate level for the development of the fundamental number skills. During this time, she will probably find it necessary to supplement the activity-teaching situations with other meaningful activities. 49

Gaitskell states that as soon as a child is capable of using a measured line, mathematics may begin to enter into some of his art work. Activities such as building model houses, making costumes for puppets or constructing puppet stages lend themselves to this correlation. 50

Modern principles of child development indicate that the tasks must be appropriate to the child's level of maturity, that he should share in developing the plan, and that


49 Kirk, op. cit., p. 294.

50 Gaitskell, op. cit., p. 353.
his freedom should be guided with understanding. Today, the accepted goal in teaching arithmetic is to present the material in ways which utilize children's own interests, purposes, drives and values in selecting, organizing, and carrying through the work.\textsuperscript{51}

Case studies, curriculum research, and experiments with matched groups have demonstrated rather conclusively, that the functional or social meaning of numbers is readily learned through personal experiences in using them.\textsuperscript{52}

Feingold makes a few suggestions, and although no reference is made directly concerning the correlation of art, the writer sees many implications. Just as all children can learn to make rhythmic movements to the beat of a metronome, so too, all children are kinesthetically sensitive to differences in weight. This sensitivity can be used to introduce quantity through concrete material. Computing with numbers should include acting out exercises. Dramatizing addition and subtraction insures that the computation is not rote recitation, but a meaningful act. Too, a clock or a calendar could be drawn to represent numbers in a relative


\textsuperscript{52}Ibid., p. 1.
Kagan gives an example of a teacher's experience who used sponge painting as a means of stimulating interest in arithmetic. The children first experimented with two related colors in learning to count by two's. A folded piece of paper was used as a guide for spacing. The next step was nine repetitions of three's using three related colors. Discussion helped in the introduction of new words and a correlation of letter symbols and number symbols in words. Sponges were used with tempera paint to make designs.

Art, as it has been used, opens a means of self-expression and self-realization for the mentally retarded. It enables the teacher to resort to activities that take into consideration the child's short attention span; cultivates latent creativity; offers somewhat of a proving ground for the child in regard to his parents, relatives and friends; provides an opportunity for success in school, and suggest directions for its application in other fields. "The interaction of the arts with speech, writing, or some form of


communication provides a real form, or organized structure that will help the child define experiences, ideas, and concepts. 55

Much more research is needed but the authors mentioned demonstrated how art can permeate the entire curriculum. "Murals can be used in connection with social studies, literature, science, and other areas, showing, for example, the development of transportation, or favorite characters from literature." 56

As a result of the information explosion and the rapidity of technological change, no body of knowledge in any field is immune to radical change. Education and re-education will become more and more life-long activities.

The correlation of art in other areas of the curriculum is still an unfinished job, but it certainly aims at making education for the educable mentally retarded child more effective.

The instruction of each handicapped human being, and the utilization of knowledge for this endeavor is therefore still a challenge.


Art and Craft Projects that may be used in developing skills in Arithmetic and Language Arts on the Intermediate Level.

Reference:


**Subject: Arithmetic**

<table>
<thead>
<tr>
<th>Project</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Arithmetic Games, p. 32</td>
<td>Concepts introduced and reinforced</td>
</tr>
<tr>
<td>Piggy Bank, p. 74</td>
<td>Budgeting</td>
</tr>
</tbody>
</table>

**Subject: Language**

<table>
<thead>
<tr>
<th>Project</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animule, p. 26</td>
<td>Reading of Dr. Seuss books</td>
</tr>
<tr>
<td>Hand Puppet, p. 40</td>
<td>Creative Expression as part of a story made up and written</td>
</tr>
<tr>
<td>Wallpaper Notebook, p. 50</td>
<td>Writing stories</td>
</tr>
<tr>
<td>Word Mobile, p. 56</td>
<td>Reading</td>
</tr>
</tbody>
</table>

Reference:


**Subject: Arithmetic**

<table>
<thead>
<tr>
<th>Project</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tearing colored construction paper, p. 55</td>
<td>Concepts include knowledge of colors, the overlapping of big and little pieces of paper, the number of colors used.</td>
</tr>
<tr>
<td>Cutting colored paper to form objects, p. 54</td>
<td>Geometric shapes</td>
</tr>
</tbody>
</table>

**Subject: Language**

<table>
<thead>
<tr>
<th>Project</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Painting with Tempera, p. 48</td>
<td>Communication skills</td>
</tr>
</tbody>
</table>
Reference:

Guide for Teachers of Educable Mentally Handicapped Children.

Subject: Arithmetic

Project
Paper Mache, p. 68
Sawdust Mache, p. 70
Weaving Easter Baskets, p. 76

Correlation
Measurements
Measurements
Measurements

Subject: Language

Project
Book Jackets with vegetable and stick painting, p. 69

Correlation
Writing

Reference:

Packman, Mildred. Activities Through the Year for Young Children with Moderate Mental Retardation. Baton Rouge, Louisiana: Louisiana State Department, 1969.

Subject: Arithmetic

Project
Design, p. 54
Tissue Collage, p. 82

Correlation
Geometric shapes
Geometric shapes

Subject: Language

Project
Collage, p. 26
Play Dough, p. 26
Spatter Paint, p. 40
Thanksgiving Frieze, p. 42

Correlation
Story telling
Story telling
Story telling
Story telling
Reference:

Subject: Language

<table>
<thead>
<tr>
<th>Project</th>
<th>Correlation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Banner for May Procession, p. 44</td>
<td>Creative expression</td>
</tr>
<tr>
<td>Sculpture--Box animals, p. 52</td>
<td>Creative expression</td>
</tr>
<tr>
<td>Wall Hanging, Stitchery, p. 70</td>
<td>Creative expression</td>
</tr>
</tbody>
</table>
CHAPTER III

SUMMARY AND CONCLUSIONS

In the preceding chapters, the aims were presented as well as the purposes, and suggested arts and crafts projects that could be used in developing skills in Arithmetic and the Language Arts.

In Chapter I, the introduction and the purpose of the study were presented. It was pointed out that Educable Mentally Retarded children, like other children, have a natural impulse to activity which makes it imperative that the curriculum be arranged for a balance in constructive activities in relation to the academic areas of concentration. It was also pointed out that one of the finest ways of providing for that change was through art and craft projects.

To aid in the understanding of the problem, Chapter II was written. In this chapter a review of the literature incorporated the physical, intellectual, and social factors related to the nature of the mentally retarded; general characteristics; academic development through art, and the
correlation of art activities in the content areas of the curriculum.

It was found that since a person has to be moved prior to expression, production of art does not occur automatically as a result of correlation of school subjects. However, if the child is properly motivated by the teacher, and is emotionally and intellectually moved by an experience in another area of learning—then fusion of art and other subjects may be possible, and the teacher will have the opportunity to make art an experience that will be rich and deep for the Educable Mentally Retarded.

The findings in the paper support to some extent the theory that art can be used to aid the mentally retarded child to learn reading, writing, and arithmetic.

A complete answer to the problem is not given, but an attempt was made to offer probable solutions to the problem in the light of the individual needs of the handicapped.

More investigation, it is hoped, will result in discoveries that will have valuable significance for teachers engaged in training special children in order that their lives may be enriched through the medium of art.
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