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"The Relative Effectiveness of Three Educational Programmes
in Promoting Academic Achievement among Latency Age Emotionally
Disturbed Boys Residing in Treatment Institutions"

A Research Proposal

Submitted to Graduate School of Social Work
Waterloo Lutheran University

By

3984

Denis Quinn

in partial fulfillment of the requirements of the Degree
Master of Social Work

April, 1970

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"The Relative Effectiveness of Three Educational Programmes
in Promoting Academic Achievement among Latency Age Emotionally
Disturbed Boys Residing in Treatment Institutions"

INTRODUCTION

Several years ago, a small group of men entered what appeared to be an ordinary house in suburban Toronto. These men continued their visits, day after day, for months on end. The outcome of their persistent visits was "Warrendale"¹ - a feature length film which violently jarred open one of the mental closets into which we, as a society, sweep away our most perplexing problems. "Warrendale" dramatically thrust into the public eye a speck of life that could no longer be blinked away. The millions who saw the film had their social blinders rudely removed by the extraordinary residents of that "ordinary" house in Toronto. This film relayed the message of their desperate plea for help and everyone who has seen "Warrendale" has been confronted with the social challenge of helping emotionally disturbed children to find their place in life.

For many, "Warrendale", like all new adventures, raised more questions than it answered. Besides emphasizing the fact that emotionally disturbed children do exist, do suffer, and do need our help, it also raised the pointed question of whether our present methods of helping these children adapt to

1. Alan King Associates, "Warrendale" - the movie.

the "mainstream of life" are realizing their intended purpose. This paper will address one aspect of the residential treatment of disturbed children - the stimulation of academic achievement.

1

BACKGROUND TO THE RESEARCH PROPOSAL

Statement of Purpose

This paper suggests a way to examine the relative effectiveness of the following three educational programmes in meeting the academic needs of severely disturbed boys living in treatment institutions:

(1) intramural special education - special classes within the institution;

(2) extramural special education - special classes within regular community schools;

(3) extramural standard education - regular classes within community schools.

The examination of academic performance in these three educational settings will be related to the diagnostic descriptions of the children involved. This will be done to examine whether certain of the educational programmes are more conducive than others to the academic achievement of children with specific types of emotional disturbance.

Source of Interest

The writer's interest in the comparative evaluation of school programmes employed by residential treatment centres springs from his experiences as a child care worker at Mount St. Joseph Centre and as a social work student at Lynwood Hall Children's Centre - accredited residential treatment centres located in Hamilton, Ontario. Mount St. Joseph and Lynwood Hall have quite divergent strategies of treatment. The former corresponds quite closely to Bettelheim's model of a residential treatment centre as a 'total institution'.² Daily activities are highly programmed and all children at Mount St. Joseph attend special classes within the institution. On the other hand, Lynwood's daily activities are loosely structured and the clinical staff places greater emphasis on their children's community involvement. All children at Lynwood attend regular or special classes within community schools. The special classes are designed to teach small groups of emotionally disturbed children and these classes are sponsored by the Hamilton Board of Education. Both the intramural educational programme of Mount St. Joseph and the extramural programmes of Lynwood Hall could benefit from further research such as the study proposed by this paper.

The Importance of Appraising School Programmes

Appraisal is an essential component in any residential treatment enterprise and should be carried on at whatever level is likely

2. See Bruno Bettelheim, Truants from Life.

to be fruitful. It is an essential tool
of both treatment and administration and
a professional obligation.³

All responsible organizations must establish the outcomes of their efforts. Since the child in residential treatment spends a large portion of each week-day in school it would seem that the educational approach employed by the institution assumes a very significant role in its attempts to realize its full treatment potential. Treatment potential must be realized as fully as possible because of the following factors:

- (a) emotionally disturbed children suffer and their illness causes much misery for those around them;
- (b) a treatment team (clinical staff and educators) is a scarce and valuable resource and the expenditure of its time and energy should not be misguided nor wasted;
- (c) there must be some justification for the vast sums of public money invested in the rehabilitation of disturbed children. In many institutions the annual public expenditure exceeds \$12,000 for each child in residence.

The Relevance of the Proposed Study to Social Work Practice

Social work practice is an important part of the total residential treatment effort. A list of the roles performed by social workers employed by treatment centres would include:

- (a) total coordination of the treatment programme - the positions of executive or clinical directors;

3. Herschel Alt, "The concept of Success in Residential Treatment - An Administrator's View," pg. 423.

- (b) serving as a professional resource to the child care staff;
- (c) conducting play therapy;
- (d) doing individual, group and family therapy with the children and their biological or foster parents;
- (e) acting as a liason person for community schools.

Since education plays a large role in the total treatment effort with which the institutional social worker is so intimately involved it's his professional responsibility to assess the educational services available and to be prepared to recommend the most beneficial method to educate any given child in residence.

The concept of success in residential treatment demands that we who undertake to influence the lives of children be clear about our task - about what they need and what we do for them; about how we wish to influence their growth and development, and finally, about how effective we are.⁴

The results of this study may provide some valuable guidelines concerning the differential use of educational services and their effectiveness for specific children. Such information would be of value to social workers in many areas of practice: institutional workers, school workers, C.A.S. workers, child guidance workers, and parole officers. In other words, this study will yield results with implications for many areas of social work practice both within and outside of the institutional sphere.

4. Herschel Alt, "The Concept of Success in Residential Treatment - An Administrator's View," pg. 423.

REVIEW OF THE LITERATURE

Emotional Disturbance and Educational Disability

The commonly held assumption that emotionally disturbed children, as a group, have educational disabilities was examined by Tamkin (1960)⁵. Tamkin reports that he found this assumption to be untrue, at least for his sample of 34 children in residence at an Ohio psychiatric hospital. He reports that 32 percent of his sample demonstrated some degree of learning disability while 41 percent were educationally advanced and 27 percent were at their expected grade level.

The writer believes that there is a serious flaw in Tamkin's study. He based the presence or absence of a learning disability on a comparison of each child's chronological age and school grade level. He failed to take into account the child's mental age. The inadequacy of comparing only chronological age with academic achievement to detect the presence of a learning disability was brought home to the writer while visiting a treatment centre in Montreal. Almost every child in the centre would have compared favourably to the norm of academic achievement for his age group. However the mean I.Q. of these children was

5. A.S. Tamkin, "A Survey of Educational Disability in Emotionally Disturbed Children," pp. 313-315.

approximately 125 and in relation to their mental ages they were underachieving academically. In conclusion, one may say that Tankin's study does not support nor deny the hypothesis that emotionally disturbed children tend to have educational disabilities.

Another study, conducted by Mayer and Wolfenstein (1954)₆ at Bellefaire - a large residential treatment centre in Cleveland, Ohio - pointed to a different conclusion. These authors found that school failures occurred in 92 percent of their sample of 100 disturbed children.

A more recent survey by Stone and Rowley (1964)₇, based on 116 emotionally disturbed children, revealed that educational disabilities in both reading and arithmetic predominated when mental age as well as chronological age, was used as "the basis from which departures in achievement were measured." In other words, disturbed children tend to underperform especially in the areas of arithmetic and reading when compared to normal children of similar intelligence.

Results from a study by Schroeder (1965)₈ of 106 children reveal that educational disability often coincides with emotional disturbance.

6. Morris F. Mayer and Charlotte M. Wolfenstein, "Diagnostic Criteria for Intramural and Extramural Schooling of Disturbed Children in a Residential Treatment Centre," pg. 363.

7. F. Beth Stone and Vinton N. Rowley, "Educational Disability in Emotionally Disturbed Children," pg. 426.

8. Lily B. Schroeder, "A Study of the Relationships between Five Descriptive Categories of Emotional Disturbance and Reading and Arithmetic Achievement." pp. 112.

In surveying child welfare and educational literature the consensus appears to be that the emotionally disturbed child is likely to have a learning problem.

Special Education for the Emotionally Disturbed Child - the school within the treatment institution

The main objective of the residential school is to help the child develop and maintain positive attitudes toward the various aspects of school and to progress in his academic skills so that he will experience minimum delay in his education due to placement in residential treatment. Through assessment of the strengths and weaknesses in academic skills or readiness for school activities, individualized programs of instruction are planned to reduce the stress so often associated with school adjustment. The child is helped to fill in existing gaps in his academic skills, knowledge, or achievement through individual remedial instruction and small classes. Appropriate school behavior is patterned through the use of structure and limit-setting. Such instruction and patterning enables the child to become better prepared to cope with the demands of school on his return to the community.⁹

The residential school attempts to provide each child with his own individualized programme of instruction. The curriculum and grading system in these classes are similar to those of the regular community schools. Some of these special education programmes contain auxiliary programmes to teach perceptually handicapped children.¹⁰

9. Lela Llorens and Eli Zubin, Developing Eco Functions in Disturbed Children, pp. 17-18.

10. One example is the Frostig Programme. Marianne Frostig has developed a series of pencil and paper exercises to help a child overcome perceptual-motor problems.

Some authours, notably Bettelheim, stress the importance of intramural schooling for disturbed children. John Dubois calls the provision of an "on-campus school" an "essential ingredient" of a residential treatment centre.¹¹ Dubois states that although a good number of disturbed children are underachievers with normal or above intelligence it would still be expecting too much to have them attend a regular neighbourhood school.

Special Education for the Emotionally Disturbed Child -
special classes within community schools

In some communities the local Boards of Education sponsor special classes within regular community schools. For example, in Hamilton, six classrooms in a newly constructed community school are set aside for this purpose. These classes are typically small - 5 to 15 pupils - and are conducted by teachers who through exceptional training and/or aptitude could be classified as specialists in teaching disturbed children. Often the teacher is assisted by a child care worker who is on hand to help the children with their seatwork and to deal with disruptive behaviour in the classroom. Even though all pupils receive considerably more attention in the special class than they would in a standard class the combination of their low frustration tolerances and their tendency to act out frustrations makes an additional teacher, usually in the person of a child care worker, a necessity.

11. John I. Dubois, Jr., "Characteristics of a Residential Treatment Centre," pg. 29.

Regular Education for the Emotionally Disturbed Child - the standard class in a community school

Some treatment institutions have developed good rapport with local school officials and have dispersed some of their residents among regular community schools. This approach demands flexibility in the local school administration. In its ideal form, this programme involves a complicated procedure of matching teacher and pupil through the close collaboration of treatment personnel with pupil adjustment counsellors, school principals and the teachers themselves. In some instances the teachers participate in their pupils' case conferences to gain a better understanding of their classroom behaviour.

A Survey of Educational Programmes Employed by 25 Residential Treatment Institutions

This survey is an attempt to give the reader some idea of what educational programmes or combinations of programmes are employed by treatment centres in actual practice. The survey is based on the educational practices of 25 accredited residential treatment centres - 21 American centres¹² and 4 Canadian centres. The findings are as follows:

Intramural special education programmes

- 12 (48%) centres employed only intramural special education programmes;
- 17 (77%) centres had the majority of their children attending such programmes;
- 23 (92%) centres had some of their children in residential

12. Data on the American centres comes from Lydia F. Hilton, The Residential Treatment Centre, pp. 60-66.

13. Based on 22 centres.

programmes.

Extramural special education programmes

- no centre depended solely on such services;
- 2 (8%) centres had some of their children attending extramural special classes.

Regular community classes

- 1 (4%) centre used regular community classes only;
- 5 (23%) centres had the majority of their children attending regular classes;¹⁴
- 13 (52%) centres had some of their children attending regular classes.

Only one centre used all three programmes. The most common pattern was the use of intramural special classes in conjunction with regular classes - the majority of children attending the residential school.

Intramural Schooling vs. Extramural Schooling - Diverging Philosophies

In assembling the data for the preceding survey the writer found that 12 of the 25 treatment centres employed intramural schooling exclusively. This approach represents the traditional philosophy of the total institution espoused by Bettelheim.¹⁵

14. Based on 22 centres.

15. See Bruno Bettelheim, Truants from Life.

This tradition began with the practice of hospitals to supply intramural schooling for all children hospitalized either for medical or psychiatric reasons. However as Reid¹⁶ points out and the foregoing survey substantiates, many modern child welfare institutions are breaking from this tradition and making use of extramural schools as well as intramural schools to educate their child clients. Reid states that the differences in philosophy can be superficially categorized as follows:

a. Children requiring residential treatment require a total therapeutic environment. For maximal results, the school must be a part of the environment. Many children whom public schools "tolerate" either do not benefit, or are damaged by the experience. If a child can adjust to and learn in a public school environment, he can probably be treated on an outpatient basis.

b. It is desirable to have reality goals for children in a residence setting. Successful attendance at public school classes is one measure of a child's ability to adjust in a normal community setting. To return to his own home or a foster home he usually must be able to make a public school adjustment. Therefore it is wise to begin experimentation with public schools prior to his discharge. Many severely disturbed children's symptomatic problems evidence themselves in the child's home (precluding outpatient therapy), but not so severely in the public school as to prevent a successful education experience. Therefore maximum use should be made of public schools - when the child can benefit from it and when undue danger does not exist around his going to and from school.¹⁷

16. Joseph H. Reid, "Discussion on Morris F. Mayer and Charlotte L. Wolfenstein, "Diagnostic Criteria for Intramural and Extramural Schooling of Disturbed Children in a Residential Treatment Centre," pg. 366.

17. Ibid., pg. 366.

Special Education vs. Regular Education

Besides the controversy over whether residential treatment institutions should employ only intramural schooling or a combination of extramural and intramural classes, there is also considerable debate on the relative merits of special education and regular education.

Trippe₁₈ states that: "special education has focused on norm deviation and on disability, viewing disability as the "cause" of norm deviation in the regular classroom." He goes on to say that special education programmes have emphasized the disturbed child's separation from the regular classroom, making compensation for the effects of his disability, and attention to specialized goals and associated curricular modification. For disturbed children, the goals of special education are to eliminate their learning disabilities and thereby effect changes in the child and his behaviour. Naturally it is the contention of special educators that their approach is essential and that small classes conducted by teachers with exceptional training and/or aptitude for working with disturbed children are superior in promoting academic achievement than the standard community classes.

On the other hand, the Ontario Department of

18. Matthew F. Trippe, "Conceptual Problems in Research on Educational Provisions for Disturbed Children," pg. 400.

Education states that:

Teachers do not need a specialist's knowledge of the many possible causes of emotional disturbance to establish and maintain a suitable educational environment for those afflicted.

Since the value of a maximum degree of association of emotionally disturbed and normal pupils is now widely recognized, the former children are enrolled in regular classes whenever practicable.¹⁹

The spokesman for the Department of Education argues that, in many cases, emotionally disturbed children stand to benefit, academically and socially, by their enrollment in a regular community school.

In his article, "Special Education for the Mentally Handicapped - A Paradox," Orville Johnson claims:

The reported research to date does not support the subjective evaluation of teachers and their contention that education for mentally handicapped children in special classes is superior to that provided children in the regular classes.²⁰

Could the same statement be made concerning the special education of disturbed children? Considering the tremendous human and monetary costs of special education programmes the writer believes that we should begin to find out.

In summary, experts in the field have different

19. Ontario Department of Education, "The Emotionally Disturbed Pupil in an Educational System," pg. 19.

20. G. Orville Johnson, "Special Education for the Mentally Handicapped - A Paradox," pg. 66.

opinions about how to educate the seriously disturbed child. Some believe that the school must be part of the "total therapeutic environment" and therefore be on campus. Others argue that this approach is overly protective and that the child needs to have some experiences adjusting to the reality situation of a school outside of the institutional setting. The only way to conclude such arguments is to conduct sound evaluative research on the respective educational programmes employed by treatment institutions. It is to this end that the following research proposal is directed.

3

RESEARCH PROPOSAL

Statement of Purpose

(a) This study will examine the relative effectiveness of the following three educational programmes:

- (1) intramural special classes
- (2) extramural special classes
- (3) regular community classes

in promoting academic achievement among latency age emotionally disturbed boys living in three residential treatment institutions:

Lynwood Hall Children's Centre - Hamilton, Ont.

Mount St. Joseph Centre - Hamilton, Ont.

Thistletown Hospital - Rexdale, Ont.

(b) Academic performances in each educational programme will be correlated with the subjects' psychiatric diagnoses to see whether a certain educational programme is more conducive than the others to academic learning for specific classifications of emotional disturbance.

Research Design

This study is an example of comparative evaluative research. To evaluate is to assess the change brought about by the conditions under study. In this case, the researcher will measure the change in academic performance brought about by each of the three educational programmes. These measures of academic change among subjects in the three programmes will enable the researcher to compare the relative effectiveness of each in promoting academic achievement. The final comparisons will be in the form of a rank order for each diagnostic classification, e.g. - intramural special education is the best method for teaching acting out neurotic children, followed by extramural special education, with regular classes being least effective in meeting the academic needs of such children. It should be noted that the intervals between first and second place and between second and third place in the rank order are not to be misconstrued as being equal intervals, i.e., one unit difference.

Subjects (Ss)

Ss for this study are the total populations of disturbed boys residing in Lynwood Hall Children's Centre, Mount St. Joseph

Centre and Thistle town Hospital.

Lynwood Hall - 27 Ss

Lount St. Joseph - 17 Ss

Thistle town - 48 Ss

The Total Number of Ss = 92

The writer wishes to emphasize that the above treatment institutions are cited only to give some concreteness to this proposal. The proposal itself is meant for much broader application than the above three institutions may imply - that is, it is hoped that the design could be used in other settings with similar programmes.

The Research Settings

(a) The residential school within each of the three treatment institutions.

(b). Special classes for emotionally disturbed children within local community schools.

(c) Regular community schools - to be chosen according to the teachers' aptitude and willingness to accept the challenge of educating one or several severely disturbed children.

Some characteristics of the above settings are worthy of note:

	Pupil/Teacher Ratio	Classroom Personnel	Grading System	School Hours Per Day
Residential Schools	6:1	teaching specialist child care worker	unit	3½
Special Classes	6-15:1	teaching specialist child care worker	unit	3½
Regular Schools	30-35:1	teacher	unit	4½

The unit system of grading is similar to the grade system of promotion except that each scholastic year is broken down into three equal teaching units and the pupil is promoted by unit.

Research Methodology

The Study Plan

The study will be conducted during the 1970-71 school year, in other words, it will run from September 1970 to June 1971.

September 1970: (1) establishment of academic baseline for each S;

(2) formation of comparable research groups within each institution;

(3) assignment of groups to educational programmes;

June 1971: (4) measurement of each S's academic change from his baseline performance;

(5) evaluation of the relative effectiveness of the three programmes of instruction;

(6) correlation of academic change within each programme with specific classifications of emotional disturbance.

The Academic Baseline

Since this is an evaluative study it is concerned with measuring change, in this case, academic change. All studies

of change are, by definition, "before" and "after" studies and in order to assess the "after" it is necessary to know the "before". In other words, a baseline must be established from which academic change can be measured.

Establishing the Academic Baseline

Each S's academic baseline will be established by:

- (1) the recording of his grade unit level from the final report of his preceding school year

and

- (2) the administration and scoring of an academic achievement test.

Unit levels are used instead of marks or percentages because academic units are less subject to individual teacher variations since the course content to be covered in each unit is standardized by the Ontario Department of Education.

The suggested instruments to be used for measuring each S's level of academic achievement are the California Achievement Tests.¹⁸ It should be noted that these are tests of educational achievement and they measure and analyze psychological processes such as inductive and deductive thinking. These tests are designed for a wide range of academic levels - grades 1 through 14 - which are assessed by the primary, elementary, intermediate, and advanced batteries respectively. These four batteries all include the same general tests with

18. E.W. Tiegs and W.W. Clark. Published by California Test Bureau, Los Angeles, 1943-1951.

content and difficulty increasing from battery to battery.

Each battery contains the followings tests:

reading vocabulary
reading comprehension
arithmetic reasoning
arithmetic fundamentals
mechanics of English and grammar
spelling

Each of these, with the exception of spelling, is divided into several subtests that are regarded as component parts of the broader category of school learning. For the purposes of this study the primary and elementary batteries will suffice. Each S will be given the tests commensurate with his grade level.

C.A.T. Validity: curricular or content validity¹⁹

C.A.T. Reliability of Component Parts: .83 to .96

C.A.T. Basis of Normative Data for Each Form: 50,000 to 100,000 cases distributed over a wide geographical area.²⁰

The advantage of using long-established tests such as the C.A.T. is that they have stood the test of time as being both valid and accurate indicators of educational achievement. Nevertheless, the research director must always check the tests' content validity for his particular research settings. If the content validity of the C.A.T. leaves something to be desired

19. If an achievement test is valid it measures what is actually being taught in the schools for which it is intended.

20. Data source - Frank S. Freeman, Theory and Practice of Psychological Testing, Rev. ed., pg. 386.

the researcher will have to choose a test whose content is more in line with the school curriculum of the area being studied. While the writer believes that the C.A.T. will be adequate for this study his opinion should be either substantiated or refuted by a small pilot study. This study would compare the accuracy of the C.A.T. with another educational achievement test in its ability to measure what is actually being taught in the local schools. The pilot study will be conducted in June, 1970 and will involve some forty pupils in regular community schools. These forty Ss will be divided into two groups, one group being administered the C.A.T., the other being administered an alternative test. The Ss' scores on the achievement tests will be compared with their academic achievement level based on teachers' written reports. The achievement test which displays the greater correspondence between its final scores and the teachers' reports will be the one chosen to measure the educational baselines of Ss in the main study.

The suggested alternative to the C.A.T. is the Stanford Achievement Tests.²¹ The S.A.T. is also a pencil and paper test. These tests provide batteries at four different levels:

The primary battery (for use at the end of grade 1, in grade 2, and in the first half of grade 3) includes tests of paragraph

21. T.L. Kelley, R. Madden, E.F. Gardner, L.M. Terman, and G.L. Kuch. Published by World Book Co., Yonkers, New York, 1953.

meaning, word meaning, spelling, arithmetic reasoning (concepts and problems), and arithmetic computation (the four fundamental processes).

The elementary battery (for grades 3 and 4) includes tests of paragraph meaning, word meaning, spelling, language (mechanics and usage), arithmetic reasoning, and arithmetic computation.

The intermediate battery (grades 5 and 6) and the advanced battery (grades 7, 8, and 9) include the same tests: namely, paragraph meaning, word meaning, spelling, language, arithmetic reasoning, arithmetic computation, social studies, science, and study skills.²²

S.A.T. Validity: content validity

S.A.T. Reliability of Component Parts: .73 to .95

S.A.T. Basis of Normative Data for Each Form: 70,000 to 106,000 cases distributed over a wide geographical area - norms derived from school systems in 38 states.

The scoring of either the C.A.T. or S.A.T. will give the researcher an indication of each S's present state of academic functioning. The achievement test score will be combined with each S's unit level to form his academic baseline.

Forming Comparable Research Groups

The research groups will be comparable in:

- (a) size
- (b) academic performance
- (c) behaviour

Size: the total population of boys in each treatment institution will form three research groups of equal size. The research groups may not stay equal in size during the course of the study because some Ss may have to be transferred from certain educational settings due to clinical or educational reasons. However, the writer believes that the groups should begin the school year with equal membership. Such divisions of the total research population would result in the following breakdown:

Lynwood Hall: (a) intramural special education group - 9 Ss
(b) extramural special education group - 9 Ss
(c) regular education group - 9Ss

Mount St. Joseph: (a) intramural special education group - 6 Ss
(b) extramural special education group - 5 Ss
(c) regular education group - 6 Ss

Thistle town: (a) intramural special education group - 16 Ss
(b) extramural special education group - 16 Ss
(c) regular education group - 16 Ss

Academic Performance: the research groups will be made comparable in academic ability through the use of a matched-groups design. The reader will recall that all Ss are to be pre-tested by an educational achievement test as part of the procedure to formulate their academic baselines. These test

scores will also be used as the criteria for matching group members in academic ability. On the basis of his test score and percentile ranking on the test's normative data each S will be classified as high, normal, or low in academic achievement - the lines of demarcation between these categories being established by the research coordinator. Following this, the researcher will ensure that there are an equal number of high achievers and underachievers in each research group.

Behaviour: also there is the classroom behaviour variable. If this variable is not controlled perhaps some groups will contain more than their fair share of disruptive children. Such an outcome might place these groups at a decided disadvantage in trying to make any academic progress. Having worked in a residential treatment centre during the past five years, the writer has found that most severely disturbed boys are apt to be drawn through emotional contagion to the acting out behaviour of a peer. Therefore in order to form comparable research groups the researcher must establish their memberships in an unbiased manner in social as well as academic areas. A method of accomplishing this is to randomly assign the Ss within each treatment institution to the three research groups with the condition that there must be an equal number of high achievers and low achievers in each group.

The method of combining random assignment with

the matched-groups design is as follows:

(1) Each S who has been classified a high achiever will be randomly assigned a number - 1, 2, 3, . . . continuing the series only to the point where there is one number for each member in the high achievers' group.

(2) The same procedure is followed for normals and low achievers respectively.

(3) Ss with the nos. 1, 4, 7, 10, 13 . . . will be assigned to the intramural special education group.

Ss with the nos. 2, 5, 8, 11, 14, . . . will be assigned to the extramural special education group.

Ss with the nos. 3, 6, 9, 12, 15, . . . will be assigned to the regular education group.

The rationale behind random assignment is that if all Ss are assigned to the research groups in an unbiased way, the groups should be statistically equivalent on subject variables which may influence the academic performance being studied. Since the effectiveness of random assignment is greater with large numbers of Ss and since the number of Ss in each of the nine research groups - three per institution - in this study is relatively small, the writer believes that an added control on subject variables is called for hence the matched-groups design is used in conjunction with random assignment.

At this point, each institution has three research

groups comparable in size, academic performance and behavioural characteristics.

Measurements of Academic Change

Academic change is the difference between baseline academic performance and final academic performance as of June, 1971. The reader will recall that each S's academic baseline is to be established from two measures:

- (1) his unit grade level upon his completion of the preceding school year - June, 1970

and

- (2) his score on the appropriate educational achievement test - September, 1970.

Academic change will be measured from these two points by assessing each S's unit grade level at the conclusion of the following school year - June, 1971 - and by the re-administration and scoring of the educational achievement test in June, 1971.

Since the standard measure of academic progress is promotion from unit to unit, or grade to grade, the research director will assess on the basis of teachers' reports the number of academic units each S has progressed during the 1970-71 school year. As mentioned previously, units will be used instead of marks or percentages because grade units are less subject to variation since they must correspond to the curriculum demarcations set by the Ontario Department of Education.

Another measure of academic achievement during the 1970-71 school year will be obtained by the re-administration of the educational achievement test to each S and comparing S's second score with his baseline score.

The writer believes that the use of the educators' evaluation of their efforts - the teachers' reports - and an outside measure of academic achievement - the educational achievement test - will yield a greater degree of accuracy in the final results. Also some interesting discrepancies may be found which could suggest further research.

Data Analysis

The research coordinator will calculate the academic change for each S within each research group. Then through computation of the t statistic he will discover whether the differences between the second and initial (baseline) scores are statistically significant - actually reflect the effects of the particular educational programme for the members of the particular group. If the differences in academic performance among Ss in the three educational programmes are significant at the .05 level then the researcher may be reasonably certain that such differences may be tabulated as accurate indicators of the relative effectiveness of these three programmes in promoting academic achievement among the Ss in this study.

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If the inter-S differences in academic performance are not significant at the .05 level they may still point to important trends concerning the relative effectiveness of the three educational programmes. The writer wishes to emphasize that a measure of statistical significance is a statement of probability and not the criterion of sound or sloppy research.

Establishing Correlations between Diagnostic Classifications and Academic Achievement in Each of the Three Educational Programmes

Using the Pearson product-moment correlation coefficient (r) the research coordinator will examine which of the three educational programmes promotes the most positive academic change in Ss with specific emotional disorders. For example, if the research coordinator discovers that acting-out neurotics make little or no progress in regular community schools but make considerably more progress in the residential schools then a valuable guideline is obtained. Through the use of r 's the researcher will be looking for trends in class assignment and academic achievement.

The writer believes that the following diagnostic classifications of emotional disturbance²³ may prove useful in establishing the correlations:

primary behaviour disorders
internalized anxiety neurotics (anxiety neurosis)

23. Taken from Mayer and Wolfenstein, "Diagnostic Criteria . . .," pg. 357.

acting-out neurotics
 obsessive-compulsives
 character disorders
 psychoticlike behaviour disorders
 emotional immaturity

General Overview of the Proposed Study

June, 1970

(1) pilot study to choose the educational achievement test to be used in the main study.

July - August, 1970

(1) staff orientation programme - teachers and clinical staff.

September, 1970

(1) establishment of academic baselines for all Ss using teachers' reports of June, 1970 and achievement test scores;

(2) formation of three comparable research groups within each institution - groups to be comparable in size, academic performance and behavioural characteristics;

assignment of groups to educational programmes.

June, 1971

(1) assessment of each S's unit progression;

(2) assessment of each S's academic achievement over the the school year by re-administering the educational achievement test to all Ss;

(3) calculation of academic change within each research group and testing this change for statistical significance

and examining the data for important trends that will lead to the knowledge of the relative effectiveness of the three educational programmes;

(5) correlating diagnostic classifications of emotional disturbance with the academic change which took place in each of the three educational programmes, to determine which programme fosters the most positive academic change for a specific classification of emotional disturbance.

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COMMENTS ON THE RESEARCH PROPOSAL

One Study - 3 Separate Research Projects

This study contains three separate research projects - one project being carried out at each treatment institution. The decision to run three separate but concurrent research projects is based on the following factors:

(A) The mixing of children from different institutions would not produce data with direct relevance to each institution. Each treatment centre is primarily interested in the welfare of its own children and how they fare in the school programmes available in the local community.

(B) The mixing of children from different institutions would mean that additional environmental variables would have to be controlled. The addition of extra variables means a greater risk of error in the final results. For example, the study might be biased by environmental variables if some children

from Mount St. Joseph were to attend Lynwood Hall's residential school or vice-versa. This environment would be extremely foreign to some children and extremely familiar to others. Such vast differences in the amount of adjustment necessary for some children to feel comfortable in their strange new environment would not yield clear research results for the institutions involved.

(C) The teachers and clinical personnel of the respective schools and treatment centres have, in many cases, invested several years establishing a good working liason with each other. It would not be sound therapeutic practice to disrupt this by the indiscriminate mixing of children from different institutions.

(D) The geographical distance between the institutions would make the running of one giant project an inefficient and impracticable scheme.

At this point the reader may be wondering why three projects are being run instead of just one project. The reasons for this are twofold: (1) The more subjects in the study the more confidence one may have in the final results. The writer believes that since this is a three condition study it requires at least the 92 subjects of this proposal - 31 per condition. (2) Also, teacher variables are not controlled in this study therefore the more teachers employed in the study the less chance there is that one or two exceptional teachers - positive or negative - will significantly distort the final

outcome. As they stand, the three projects will involve approximately 20 teachers.

Major Research Personnel

This study will be carried out by 4 research personnel:

- (a) local research director in each treatment institution
and
- (b) a research coordinator supervising the complete study.

The local research directors should be chosen from the social work staffs of the three institutions. Those chosen should have several years experience in the institution and be acquainted with basic research methodology and psychometric tests.

The functions to be performed by the local research directors are:

- (1) to interview and select the teachers who will be participating in the study;
- (2) to administer and score the educational achievement test and assess the unit grade level to form each S's academic baseline;
- (3) to formulate comparable research groups and assign them to their respective educational programmes;
- (4) to obtain second scores on the achievement tests and make second unit grade level assessments for all Ss and present all data to the research coordinator;

- (5) to be on call to handle any emergency situations which may occur as a result of randomly assigning Ss to the educational programmes and, in collaboration with the research coordinator, to make the necessary re-assignments;
- (6) to conduct progress meetings with the institutional staff and outside teachers and have regular consultations with the teachers involved.

The research coordinator should be a social worker with considerable sophistication in research methods and procedures. Ideally, this person should not work in any of the treatment institutions nor have any special attachment to them. There is a strong case to be made for obtaining a worker from the Social Planning and Research Council since the results of this study may have broad community implications. The research coordinator will be responsible for the total study and his specific functions are as follows:

- (1) to conduct the pilot study to compare the content validity of the C.A.T. with the S.A.T. and then choose the more appropriate test;
- (2) to conduct the staff and teacher orientation programme at each of the three institutions;
- (3) to have regular consultation with each local research director;
- (4) to tabulate the final results and check for trends and statistical significance;
- (5) to correlate academic performance in each educational

programme with diagnostic classifications of emotional disturbance;

(6) to write the final report of this study.

Cost of Conducting the Study

Although all major research personnel will always be on call during the course of the research projects they will not have to devote all their working hours to this study. The estimated cost breakdown is as follows:

(1) research coordinator's salary - \$9,000
based on \$12,000 per annum

15 days - pilot study

30 days - setting up projects, staff and teacher orientation at each institution

80 days - weekly consultation with local research directors - 2 days per week

50 days - analyzing data, writing the final report

175 days (approx. $\frac{2}{3}$ of a working year)

(2) local research directors' salaries - 3 X \$8,000
based on \$12,000 per annum

10 days - summer orientation programme

10 days - interviewing and selecting teachers

25-50 days - administering and scoring educational achievement tests and assessing unit grade levels

80 days - consultation with institutional staff, teachers and research coordinator

5 days - compiling the final data for his project

130-155 days (approx. $\frac{2}{3}$ of a working year)

- (3) test forms and manuals - \$500
- (4) stenographical costs - \$1,500
- (5) mileage, phone, incidentals - \$1,000

Total Estimated Cost - \$36,000

Some Limitations of the Proposed Study

Since teachers' personalities and their subsequent rapport with their pupils definitely have some effect the final results of this study must only be taken as suggestive for broader application because the teachers' methods of interacting with their pupils is not controlled in this study. Hopefully, the use of approximately 20 teachers in this study will serve to offset the effects of a few "stars" or "duds" but there is no guarantee of this. However, if additional studies yield similar results one may assume that it is the educational programme itself which produces the differential results.

Also, this study does not pretend to establish what aspects of the three educational programmes are yielding certain results. Variables such as class size, special equipment, . . . may be just as instrumental in producing the final result as the teacher himself.

Finally there is the matter of the study's cost. Considering the cut-back in government expenditure, research

grants are much harder to come by. Since this study may have broad implications for community educational programmes perhaps the local Social Planning and Research Councils could be persuaded to share some of the cost or supply a research coordinator gratis. It is very disheartening for social workers to design research projects which, in most cases, cannot be adequately financed, and then to be criticized for their non-scientific approach.

When one considers that the cost of this study only comes to 3% of the annual cost of keeping the Ss of the study in residential treatment then the expenditure appears completely justified. Every year millions of tax dollars are invested in the rehabilitation of emotionally disturbed children in Ontario alone. The writer believes that the time is long overdue for treatment institutions to be made accountable for the efficient use of such vast sums of money. To do this additional money must be granted for research into the quality of residential treatment. In the long run studies such as this may save the people of Ontario millions of dollars as well as untold costs in human misery among the afflicted and their families.

An Ethical Consideration

The random assignment of Ss to educational programmes may throw their academic advancement during the 1970-71 school year into jeopardy. If there are any clear prognostic signs

that a subject cannot advance within the assigned educational programme and could advance in one of the alternative programmes then the local research director, in collaboration with the research coordinator, will make the necessary reassignment.

Results Expected

The writer believes that there will be a pronounced difference between the academic performance of pupils in special classes and pupils in regular classes with the children in special classes outperforming, as a group, their counterparts in regular classes. The writer's experience in a residential school programme leads him to this conclusion.

However the individual data will probably contain some surprising findings for the clinical staffs of all centres. Certain children will be "making it" in regular classes much to the amazement of their former teachers.

With regard to the correlations between academic performance in specific programmes and diagnostic categories of emotional disturbance, previous studies²⁴ have pointed out that children who are emotionally disturbed are not one group who share the same affliction which yields to one programme of educational treatment. A study conducted at Bellefaire - a large American residential treatment centre - with 100 Ss

24. Mayer and Wolfenstein, pg. 363; Schroeder, pg. 111.

revealed that:

Certain types of diagnostic categories are better helped in intramural schools than in public schools. This is especially true for the psychoticlike child, the overanxious acting-out child who easily becomes "delinquent" in public school, the immature child, and for children with certain types of character disorders. For the other categories public school might serve a very good purpose. It must be said that the ability of the public school to absorb children with certain types of behavior depends on the degree in which this behavior is socially disturbing. For instance, the fact that a great percentage of children with an anxiety neurosis did well in public school shows that if their anxiety does not affect their learning they can adjust in public school.²⁵

Implications of the Study for Social Work Knowledge and Practice

To begin with, this study will supply additional information to social workers who are involved in school counselling or parent-child counselling. A child with a learning disability is often a source of friction in the family and an easy target for scapegoating. Children who have been scapegoated, or otherwise persecuted, in their own families because of problems at school tend to eventually define themselves as worthless, dumb or stupid. For such children life is a series of failure experiences and soon failure becomes self-justifying, i.e., "I couldn't do that because I'm stupid."

25. Mayer and Wolfenstein, "Diagnostic Criteria . . . ," pg. 363.

Do regular school classes provide enough ego support for a child to overcome such hopelessness? Does the competitive element of grades and percentages which are emphasized in regular school system serve to convince the child further that he is a dumb kid? Hopefully this study will throw some light on these questions.

If this study reveals that special education is generally superior in promoting learning among disturbed children then social workers, as a body, should campaign either for more special education programmes or a revamping of the regular school programmes. Also, social workers could play an important role in helping teachers in the public school system to learn more positive ways of responding to the underachieving disturbed child. Having conducted a very recent study on the relationship between academic progress and overt classroom behaviour Swift and Spivack (1969) conclude:

The underachieving child is manifesting underachievement in a variety of ways which suggest a general lack of adaptation to the demands of the classroom environment as presently designed. The further implication is that underachievement cannot be conceived of only in achievement terms but must be seen as an inability of the total child to adapt to an environment in which he spends a great deal of his waking hours. It would behoove the educator to design not only better curricula but also better strategies of response to those classroom behaviors which define the underachiever. The

likelihood of a cyclical effect of poor classroom behavior and poor achievement is too evident.²⁶

In Canada, as well as in many other countries, there is an acute shortage of treatment facilities to help emotionally disturbed children. This is probably due to the high cost of special treatment and the shortage of qualified clinical personnel. Both of these factors are beyond the control of the social work profession. However social workers within these scarce institutions can greatly influence the efficiency of their operation. Indeed, it only seems logical that if one is faced with a shortage of anything then one should make the most efficient use of what he has. By efficiency is meant quality of treatment services and the number of children being helped. However one must be careful never to sacrifice the former to increase the latter. Increasing the quality of residential treatment requires sound research on the specific aspects of the total treatment programme. This study is cited as an example of such research. Sometimes the pressures of time and the board of directors force treatment institutions into broad non-specific research ventures such as attempting to measure the overall effectiveness of the total treatment programme. Such studies may sound impressive and the percentages of treatment success may satisfy the Board or the community at large but such mathematical percentages do little to improve the quality

26. Marshall S. Swift and George Spivack, "Clarifying the Relationship Between Academic Success and Overt Classroom Behavior," pg. 104.

of the work being undertaken at the particular institution. All practitioners in the helping professions must risk subjecting their work to close and careful scrutiny. Concrete and specific research is the only answer.

Before concluding this paper the writer would like to mention four factors to be considered in choosing special education programmes and/or regular education programmes as a means to educate seriously disturbed children. Up to this point the discussion has been focused on the relative effectiveness of special and regular classes with regard to their ability to promote academic learning. However the choice of educational programmes is not that simple. There are other criteria - deserving of further study - which must be considered in making such decisions. Four of these criteria follow:

- (1) pupils' academic performance
- (2) pupils' social performance
- (3) efficiency
- (4) cost

Pupils' academic performance - this is probably the most important factor since schools exist to promote academic achievement. All residential treatment efforts should be geared toward helping the disturbed child to re-enter normal community life. Since formal education is one of the main facets of community life it follows that a child's academic

progress during his period of institutionalization is a key factor in his successful discharge. Therefore one must determine what manner of education enables the child to advance to the highest possible academic level within a given period of time. Hopefully the proposed study will begin to answer this question.

Pupils' social performance - most children who enter treatment centres are socially backward. Since a great portion of a child's waking hours are spent in school one must ensure that he has an environment conducive to social as well as academic learning. For instance, would a disturbed child who is failing in the regular school system be automatically grouped with children much younger than he and would such grouping serve to retard his social development? On the other hand, does the grouping of disturbed children in a special class fail to provide the necessary stimulation to promote the social skills commensurate with their age? These questions are deserving of further study.

Efficiency - another factor to be considered is the efficiency, in terms of human cost, of the special education programmes when compared with regular school programmes. The special classes, both intramural and extramural, tend to be small - 6 to 15 pupils in each. Often the teaching specialist is assisted by a child care worker. Therefore one classroom and double the staff are used to educate less than half the number of children that are normally served by the regular community

class. Is this an efficient method of educating disturbed children? The answer to this question depends greatly on the positive differentiating effects of special classes on the previous two factors of a child's academic and social performance.

Cost - this factor is associated with the previous three. Based on teaching salaries alone the annual cost of educating disturbed children through special education programmes ranges from \$1,000 to \$2,000 per pupil. The annual cost of regular classes, based on teaching salaries, is approximately \$200 per pupil. Do the effects of special education justify its extremely high cost? Again, the answer depends primarily on the child's academic and social gains through such classes.

As the reader can see the choosing of educational programmes for disturbed children is a very complex process. Hopefully, the proposed study will begin to unravel some of this complexity and contribute to more accurate decision-making regarding the education of severely disturbed children.

Summary

This paper contains a research proposal and methodology designed to measure the relative effectiveness of intramural special classes, extramural special classes, and regular

community classes, in promoting academic achievement among specific diagnostic categories of emotional disturbance. The subjects for this study are the total populations of latency age emotionally disturbed boys living in three accredited treatment institutions.

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