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ABSTRACT

Twenty-four moderately subnormal children (6 to 17 years old) were integrated onto a campus in New Zealand serving nonhandicapped 11 to 13 year olds. Although the disabled students received primary instruction from their own teachers, there were social, sports, and extracurricular opportunities for mixing. Analysis of questionnaires completed by teachers, parents of both handicapped and nonhandicapped students revealed uniformly high rates of acceptance of the project's principles and practices among all respondents. Observation of playground interaction disclosed that retarded Ss spent 60% of their time in active interaction, with a significant tendency toward increasing participation over a 2 year period. Less than 10% of the interactions elicited negative responses from nonhandicapped students. (CL)

AN EVALUATION OF THE INTEGRATION OF MODERATELY INTELLECTUALLY HANDICAPPED CHILDREN INTO A REGULAR SCHOOL ENVIRONMENT

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Hamilton
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ABSTRACT

This report presents the results of an investigation of a project in which 24 moderately subnormal (IH) children varying in age from 6 to 17 years were located on the campus of a newly-established intermediate which caters for children in the 11-13 year age range. The IH children received most of their instruction in classes under the guidance of their own teachers, but there were opportunities for them to mix with the intermediate children during breaks and lunch hours, as well as in activities such as manual classes, sports and assemblies.

The research involved evaluating the attitudes of the teachers, the intermediate children and the parents of both sets of students during the first year and observing the playground interactions of the IH children during the first two years. This report presents the results of these analyses together with a range of comments made by the respondents in support of their responses to the questionnaires.

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It is a pleasure to acknowledge the assistance I received in carrying out this study.

I particularly wish to acknowledge the considerable contribution made by Mary Lane in devising the questionnaires, in carrying out the playground observations and in preparing data for computer analysis.

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New Zealand Psychological Society Conference, Auckland, August 1977;

ANZAAS, Melbourne, September 1977;

First National Conference on Exceptional Children, Hamilton, May 1980;

Seminar on Educational and Vocational Opportunities for Mentally Retarded Children and Adults, arranged by the New Zealand Institute of Mental Retardation, Wellington, May 1981.

David Mitchell

TABLE OF CONTENTS

I. INTRODUCTION

Review of Literature

One of the most important and controversial issues in special education is the extent to which handicapped children can and should be educated in regular school environments (Carlberg and Kavale, 1980; Dunn, 1968; Forness, 1979; Jones et al, 1978; Larrivee and Cook, 1979; Meisgeier, 1976; Mitchell, 1979; Warnock, 1978). This issue of 'integration' or 'mainstreaming', has recently received considerable attention in the United States where a federal law - PL94-142 - has made it obligatory for agencies receiving federal funds to place handicapped children in the 'least restrictive environment' consistent with their educational interests. A similar - but somewhat weaker - principle is also embodied in statute in the United Kingdom, where Section 10 of the Education Act 1976 has the effect that, subject to certain qualifications and from a date to be appointed by the Secretary of State, handicapped pupils in England and Wales are to be educated in ordinary schools in preference to special schools.

This recent legislative concern for integrating handicapped children into regular schools reflects the influence of two main factors. Firstly, since the late 1960s, many countries have been exposed to a vigorous advocacy on behalf of the handicapped for their right to enjoy an existence as close as possible to the normal. Such a philosophy underlies, for example, the United Nations Declaration of the Rights of Mentally Retarded Persons in which the principle of "promoting their integration as far as possible in normal life" is asserted. The second influential factor has undoubtedly been the considerable body of research during the last decade or so on various aspects of integrating handicapped children into various kinds of school settings.

Research provides a sound data base for policies and practices concerning the integration into regular schools of children in the following three categories of handicap: (a) Mildly subnormal : Bradfield et al (1973), Bruininks, Rynders and Gross (1971), Budoff and Gottlieb (1976), Clark (1964), Dunn (1968), Gampel, Gottlieb and Harrison (1974), Geurin and

Szatlocky (1974), Goodman, Gottlieb and Harrison (1972), Iano et al (1974), MacLennan (1977), MacMillan, Jones and Meyer (1976), Macy and Carter (1978), Peterson and Haralick (1977), Sheare (1974), Shotel, Iano and McGettigan (1972), Smart and Wilton (1975), Smart, Wilton and Keeling (1980), Snyde Apolloni and Crooke (1977), Ward et al (1978) and Watts et al (1978); (b) sensory handicapped, especially hearing disabilities : Better and Mears (1973), Brackett and Henniges (1976), Frick (1973), Jamieson, Parlett and Pocklington (1977), Kennedy (1976), McCauley, Bruininks and Kennedy (1976), Mears (1973), Meltzer (1978), and Northcott (1971); (c) physically handicapped : Anderson (1973, 1975), Billings (1963), Barry, Garvey and Byrne (1975), Cope and Anderson (1977), Loring and Burn (1975), Medland (1980) and Rapier et al (1972). A bibliography of New Zealand studies on integration has been published recently by Jackson (1981).

A careful search of the literature yielded only a small number of studies related to the integration of moderately or severely subnormal children[1] into regular classrooms or schools. These studies fall into three broad groups.

The first group comprises surveys of attitudes towards the principle of integration. Ward et al (1978) reported on the results of a survey of nearly 1300 principals of primary and high schools in New South Wales regarding their willingness to have different categories of exceptional children integrated into regular classes. Of the nine categories, moderately subnormal children were ranked 8th in order of preference, only slightly ahead of emotionally disturbed children. (Notwithstanding these results, in another recent Australian study it was reported that 0.06 per cent of the total school enrolment were moderately/severely handicapped children (Andrews et al, 1979)). Similar attitudes towards moderately subnormal children being mainstreamed into regular schools were expressed by a sample of 345 public school principals in Maine (Davis, 1980). In their prognoses of the likelihood of such children being successfully mainstreamed, only 6.1 per cent of the principals considered they had an "excellent" chance, with 38.6 per cent viewing moderately subnormal children's chances as "poor" or "very poor". These ratings compared un-

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[1] In New Zealand, this group is generally referred to as intellectually handicapped (IH); this nomenclature will be employed throughout the report, but occasional references will also be made to trainable mentally retarded (TMR) children.

favourably with all categories of handicap except the severely and profoundly handicapped and, as with Ward et al's sample of Australian principals, the moderately emotionally disturbed. Parents' preferences for the school settings for their children formed part of a survey carried out in New Zealand (Mitchell, 1981). Out of a total sample of 152 parents of children who were under the age of seven years and who had been professionally identified as having special needs, 59 were parents of intellectually handicapped children. Of this group, 20.3 per cent preferred a special school setting for their child, 61.0 preferred an arrangement which included special provisions with opportunities for contacts with non-handicapped children, 6.8 per cent wanted their child placed in a regular school, and 11.9 per cent were uncertain.

A second group of studies is made up of those which have evaluated the effects of actual attempts to integrate IH children into regular school settings on the attitudes of the persons involved. Stewart (1980) reported on the results of a survey of the principals of 46 of the 51 state schools for IH children. Of those schools, 8 were located within the grounds or building of a regular school, 9 were located within 250 metres of a regular school and 29 were located some distance from regular schools. Of the 46 schools, only 17 were not attempting some form of integration. Those that were, reported positive attitudes towards, and general acceptance of, the IH children from the pupils in the regular schools. The principals of the special schools considered that their integrated pupils gained most in the areas of social skills and language development, many commenting on their IH children's growth in confidence and assertiveness and their improved ability to play with regular school children, even in games that involved following complex rules.

More direct evidence of attitudinal shifts as a result of integration experiences have been recorded in two studies (Bird, 1979; Cronk, 1978). In a small-scale investigation of a partial integration scheme in an Australian community, Bird (1979) was able to demonstrate a shift in attitudes in children enrolled in a regular primary school who experienced regular interschool visits between their school and an adjacent special school for moderately intellectually handicapped children. These exchange visits involved small groups of children from each school attending assemblies and art and music lessons in each school. To evaluate the programme, Bird asked the children from the regular primary school to list

their feelings about the intellectually handicapped children before they met them and after they had participated in the exchange visits. When these responses were classified there was a marked shift from unfavourable or unsure attitudes (72 per cent and 26 per cent, respectively) before the visits to favourable attitudes (98 per cent) after the visits. Cronk's (1978) study was concerned with investigating the effects on the attitudes of regular school children, their teachers and members of their PTA board of a carefully-structured set of experiences with trainable mentally retarded (TMR) children. Small groups of regular class children from the 1st, 3rd and 6th grades visited a TMR class on four occasions when they observed the retarded children, viewed a tape-slide programme on them and engaged in various social and school-type activities with them. The teachers and PTA members viewed the slide-tape programme and visited the TMR classroom. As a result of these experiences, significant changes in attitudes in the positive direction were recorded for the 1st and 3rd grade children who experienced the integration opportunities compared with those who did not.

The third group of studies report on direct observations of the behaviours of IH children who have been directly involved in integration projects. In one of these, Macy and Carter (1978) set out to compare the effects of a programme in which exceptional children (including a group of trainable mentally retarded children) were mainstreamed into a regular classroom with the effects on a matched control group from a traditional, self-contained programme. They found no differences between the two groups on either the academic items or the social-affective items of a school performance checklist completed by teachers. Unfortunately, no separate analysis was carried out for the TMR children. More encouraging results were reported by Santomier and Kopczuk (1981) from their study of an integrated physical education setting with nine TMR and nine non-retarded seventh grade students matched on sex and chronological age serving as the subjects. They found that a process of pairing TMR with non-retarded individuals, combined with teachers giving praise for social interactions, subsequently led to increased rates of social interactions from the TMR students. Similarly positive results were reported by Fredericks et al (1978) in their study of six moderately and severely handicapped preschool children who were integrated into a regular day care setting. For these children the primary placement was in a special class but they joined the non-handicapped children for activities such as art and gross motor play. After a period of six months in

this programme, Fredericks et al found that the handicapped children spent a higher proportion of their time in parallel or associative play, with a corresponding reduction of time in unoccupied, solitary play and onlooker behaviour. There was also an increase in the frequency of verbal initiations. The pattern of results reported by Fredericks et al did not find support, however, in a recent study by Sinson and Wetherick (1981) of a group of seven Down's Syndrome children who were placed in a normal play group. According to Sinson and Wetherick, the normal children made heroic but unsuccessful attempts to establish contact with the Down's Syndrome children but eventually gave up, with the result that the Down's Syndrome children became isolated in the group. These results were interpreted in terms of the handicapped children's failure to maintain mutual gaze patterns.

A recent New Zealand study by Page, Broadley and Blair (1981), however, suggests that older Down's Syndrome and normal children engage in a higher degree of social interaction than might be expected from Sinson and Wetherick's findings. In this evaluation of playground interactions that took place between eight moderately subnormal children (seven of whom were Down's Syndrome) who had been placed in a class within a regular primary school, Page and his colleagues found that the IH children spent approximately one-quarter of their time interacting with children from the rest of the school. They also found that a greater proportion of teachers in the "host" school exhibited positive attitudes towards the integration of IH children than did teachers from other schools. Parents of both the IH and the non-handicapped children were in favour of the integration scheme, many of the latter group indicating that they felt their own children were gaining from the experience. Notwithstanding the apparent success of the scheme, it was not possible to move the IH children onto a more appropriate school when they became too old for the primary school and they were therefore returned to their original special school. Page, Broadley and Blair have presented evidence which suggests that, consequent upon their return to the special school, the IH children's rate of intellectual and social development declined, relative to that which to place during the integration scheme.

Background to the Study

Although it has been the long-standing policy of the New Zealand Department of Education to integrate atypical children into regular classes or schools whenever possible, this policy has not, in general, been extended to intellectually handicapped (IH) children. Of the IH children being catered for in the school system (2061 as of July 1980), the majority are enrolled in special schools with only minimal opportunities for regularly mixing with normal children (Stewart, 1980).

As from the beginning of 1977, however, 24 IH children, ranging in age from 6 to 17 years, were located on the campus of a new intermediate school in Hamilton. The children were selected for placement in this arrangement solely on the basis of their geographic location. The IH children and their teachers occupied spare classrooms in that school for 15 months, when they transferred to their purpose-built school in the same grounds as the intermediate. The children received most of their instruction in classes under the guidance of their own teachers. Opportunities were available for some IH children to have contact with the intermediate children in their school activities, particularly in manual classes, sports, and assemblies; all children had opportunities for mixing with the intermediate children during breaks and lunch periods. Prior to moving into the intermediate school, they and their teachers were located in a large special school for IH children.

In order to evaluate this innovation, a two year-long research project was set up. This involved two procedures: (a) evaluating the attitudes to the integration programme of those in it during the first year and (b) observing the playground interactions of the IH children during the first two years. This paper reports on the results of the study and presents some implications of the findings.

II. METHOD

Procedures

Questionnaire. During the first week of the simultaneous establishment of the two schools, questionnaires were mailed to both groups of parents and administered to the intermediate children and their teachers. Where possible, identical or similar questions were used for each of these groups to facilitate the comparison of attitudes. Subjects were asked to respond to each question on a five-point scale, ranging from complete agreement to complete disagreement with various propositions, and were encouraged to comment further if they wished. An attempt was made to balance the number of negatively and positively worded propositions. Each group was asked questions on four broad themes:

(i) general attitudes towards integrating IH children with non-handicapped children;

(ii) anticipated effects of the integration project on IH children;

(iii) anticipated effects of the project on the non-handicapped children;

(iv) the effects of including IH children who are not within the usual age range of intermediate children.

In addition, there were questions which were specific to the various groups. For example, the intermediate children were asked to comment on the proposition, "I would only play with the intellectually handicapped children if my friends did." A sample questionnaire as administered to the intermediate parents is included as Appendix A.

In order to monitor any shifts of attitudes that may have taken place during the first year of the project's operation, a second set of appropriately modified questionnaires was administered to the same subject populations towards the end of the first school year.

Observations. In order to monitor the nature of the contacts between the IH and intermediate children the playground behaviours of the IH children were observed on three occasions - shortly after the commencement of the project, towards the end of the first school year and towards the end of the second school year. The observations were carried out in the lunch period and commenced once the children had finished eating.

Data on the following features of the children's benaviour were recorded:

(i) zone in which the child was located (see Appendix B for sketch plan of the campus);

(ii) type of activity in which the child was engaged;

(iii) structure of social unit;

(iv) composition of social unit;

(v) contacts' responses.

The full category system is outlined in Appendix C.

The schedule required an observer to "track" each IH child individually and to record for each of them three separate 8-minute sequences of playground behaviours. A time-sampling format was used. This involved making an observation every 20 seconds, with a 'bug-in-the-ear' device aiding the observers in their timing of the recording intervals. This procedure was followed on all three occasions.

Data on the reliability of the category system for the playground observations were obtained by ascertaining the level of agreement between independent ratings of behaviour made by the principal observer and a senior student. Prior to these data being obtained the second observer was given approximately twelve hours training on the use of the coding system in the field. Independent 8-minute records of playground behaviours were then obtained on one occasion for each of the 24 IH children present during the first series of observations. In order to control for the effect of divergence in timing the onset of observation intervals the principal observer unobtrusively announced the beginning and end of each 5 second observational interval to the co-observer.

Interobserver reliability coefficients were calculated for four of the broad categories of behaviour by dividing the number of agreements by the sum of agreements and disagreements within each category. Using this method, the following interobserver reliability coefficients were obtained:

Activity:	.87
Social unit:	.93
Composition of social unit:	.96
Contacts' responses:	.87

Subjects

Since children, parents and teachers were all regarded as being affected by the integration project, all served as subjects for different aspects of the study.

The subjects from whom data on attitudes regarding the project were sought and obtained are summarised in Table 1. In brief, data were sought from the parents of the 24 intellectually handicapped (IH) children, the parents of 175 intermediate children (in the 11-13 year old age group), the intermediate children themselves, and the 10 members of staff in the Intermediate School.

TABLE 1

Summary of the subjects involved in the questionnaires in Phases I and II of study

Subjects	Phase I (Feb. 1977)			Phase II (Nov. 1977)		
	Questionnaires Circulated	Questionnaires Returned	Response Rate	Questionnaires Circulated	Questionnaires Returned	Response Rate
Parents of IH children	24	22	91.7	24	19	79.2
Parents of Intermediate children	175	127	72.6	175	87	49.7
Teachers of Intermediate children	10	10	100.0	10	8	80.0
Intermediate children		172			169	

The subjects of the playground observations were made up of 15 IH children who were present on all three occasions when these data were obtained. For the purposes of analysis, these children were divided into younger (N = 8) and older N = 7) age groups relative to the ages of the intermediate children. As can be seen in Table 2, the mean ages of the two groups were 9 years and 4 months and 14 years, respectively, while the mean IQs were 45.6 and 46.1, respectively.

TABLE 2

Summary of IH children present on all three occasions of playground observations

Subject	Sex	Age[1]	IQ[2]	Comment
02	M	11.4	48	
03	M	6.7	49	
05	M	7.0	55	Expressive aphasic
08	F	9.0	45	Down's Syndrome
17	F	10.1	30	Epileptic
21	M	12.3	42	
22	M	9.3	54	
23	M	9.1	42	
$\bar{X}$		9.4	45.6	
07	M	15.2	35	
09	M	13.3	47	
10	F	13.9	45	
11	M	14.0	47	
12	M	13.7	47	Epileptic
13	M	15.3	47	
15	M	12.9	55	Visual handicap
$\bar{X}$		14.0	46.1	

[1]Age at beginning of project

[2]The mid point of ranges, as assessed by Psychological Service. Some children's assessments had just been carried out several years prior to the project.

Statistical Analysis

Non parametric statistical analyses (Siegel, 1956) were carried out on the data, as follows:

(a) X^2 test for two independent samples: comparisons of different subject groups' responses to the questionnaire at any given time;

(b) X^2 one sample test: comparisons of the same subject groups' responses to the questionnaire at different times;

(c) Friedman two way analyses of variance: comparisons of the same subject groups' playground behaviours on three different occasions;

(d) Mann Whitney U test: comparisons of younger and older IH children's playground behaviour;

(e) Wilcoxon matched-pairs signed-ranks test: comparisons of the same subject groups' playground behaviours on two different occasions.

It should be noted that in employing "order technique" statistics (Hays, 1963), as opposed to parametric tests, there is a greater risk of Type II errors and a loss of capacity to test for interactions in this data.

The various analyses presented in the tables relating to playground observations refer to the mean percentages of individuals' behaviours. Since one or two cases can exert a considerable influence on overall percentage when small samples are studied, caution must be exercised in comparing such percentages. The order techniques employed in this study, of course, take these factors into account.

III. RESULTS AND DISCUSSION

1. QUESTIONNAIRE DATA

Proposition 1 (Table 3)

> It is the community's responsibility to provide opportunities for intellectually handicapped children and non-handicapped children to mix with each other (intermediate parents, intermediate teachers, IH parents).
>
> There should be plenty of opportunities for intellectually handicapped children to mix with normal children (intermediate children).

As can be seen in Table 3, this proposition was supported overwhelmingly by all groups. Each one of them had at least 80 per cent of its members either agreeing completely or agreeing with reservations, most of them having around 90 per cent in one or other of these two categories of agreement. Between-group comparisons yielded no statistically significant differences on either occasion, nor did any of the comparisons of the same group over time.

This acceptance of the need for intellectually handicapped and non-handicapped children to have opportunities to mix with each other reflected a variety of motives. These fell into five broad groups:

(i) Learning opportunities. Many explanations advanced by the intermediate children centred on the notion that the IH children would have more learning opportunities in an integrated setting, the following being typical:

> They would learn a lot from us (Int child II[2]).
> Hopefully we would be of influence and they may copy us (Int child II).
> So we can teach them things (Int child II).
> They learn to be more and more like normal children in the way they act (Int child II).

(ii) Preparation for the future. The assumption that the IH children would eventually have to adapt to society and that this scheme provided a means for them to begin the process was commented on by several individuals:

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[2] Intermediate child, second questionnaire.

These children are all part of the community and early integration will lead to a greater acceptance on both sides in later life (IH parent II).
... would help them mix with society later in life (Int child II).
Later in life they will have to mix with normal children and they would be used to it (Int. child II).

TABLE 3

It is the community's responsibility to provide opportunities for intellectually handicapped children and non-handicapped children to mix with each other (intermediate parents, intermediate teachers, IH parents).

There should be plenty of opportunities for intellectually handicapped children to mix with normal children (intermediate children)

	IH Parents		Int. Parents		Int. Children						Int. Teachers	
					Boys		Girls		Total			
Series	I	II	I	II	I	II	I	II	I	II	I	II
N	22	19	127	87	80	74	97	95	178	169	10	8
1. Complete agreement	77.3	57.9	57.8	57.5	46.9	44.6	63.9	61.1	56.2	53.8	60.0	62.5
2. Agreement with reservations	18.2	31.6	35.9	33.3	40.7	39.2	30.9	28.4	35.4	33.1	30.0	37.5
3. Disagreement, but not strong	4.5	5.3	0.8	4.6	2.5	9.5	2.1	7.4	2.2	8.3	0	0
4. Complete disagreement	0	0	3.9	2.3	0	4.1	0	1.1	0	2.3	10.0	0
5. No opinion	0	5.3	1.6	2.3	9.9	2.7	3.1	2.1	6.2	2.3	0	0

Statistical Analysis

	χ^2	df	p
Series I *			
Int Parents vs int children (Cats 3 & 4 collapsed)	5.11	3	NS
Int Parents vs IH parents (Cats 3, 4, & 5 collapsed)	3.10	2	NS
Boys vs girls (Cats 3 & 4 collapsed)	7.16	3	NS
Series 2 *			
Int Parents vs int children (Cats 3 & 4 collapsed)	1.00	3	NS
Int Parents vs IH parents (Cats 3, 4, & 5 collapsed)	.04	2	NS
Boys vs girls (Cats 3 & 4 collapsed)	4.62	3	NS
Series 1 vs Series 2 **			
Int Parents (Cats 3, 4, & 5 collapsed)	1.34	2	NS
Boys (Cats 3,4 & 5 collapsed)	1.01	2	NS
Girls (Cats 3,4 & 5 collapsed)	5.63	2	NS
Int. Children (Cats 3 & 4 collapsed)	4.69	2	NS

* χ^2 test for two independent samples

** χ^2 one-sample test

(iii) Self concepts of the IH and their parents. Several intermediate children and their parents expressed their sensitivity to the feelings of the IH children and their parents, thinking that the integration scheme would develop more positive self concepts:

> ... it seems to me that it is possibly more of a help to the parents of the IH children, a feeling of not being alone and that the child is acceptable to others, bringing about a change in attitudes (Int parent II).

... the children will feel wanted amongst society and will therefore be willing to learn (Int parent II).
It might make them feel that they aren't all that different (Int child II).
... how would you like to feel rejected? (Int child II).

(iv) Benefits to the intermediate children. Some respondents, particularly the parents of intermediate children, thought that the mixing would be beneficial to the intermediate children:

Our daughter now accepts IH children much more naturally (Int parent II).
Only through this can any child hope to accept other children who are handicapped (Int parent I).
It would be good if people got to know about the IHC children (Int child II).
It shows us how lucky we are (Int child II).

(v) General rights. A few individuals took a broad view of this proposition, arguing the "rights" of the handicapped to be educated in integrated settings:

The sooner this (ie, the community's responsibility) is realised the better (IH parent II).
Both sets of children should be taught equally and allowed to reach their full potential (Int parent II).
Just cause we're normal and they're not who says it's bad or horrible to mix with them (Int child I).

As can be seen in Table 3, mild or major disagreement with the proposition was expressed by only a small minority of individuals. No clear groups of reasons for this disagreement emerged, the following being representative of the range:

Some people don't get along with the IHC (Int child II).
When you walk around the school they come up to you and kick and hit (Int child II).
Sometimes the IHC are annoying, especially if you have a headache (Int child II).
Mixing must be done on a supervised basis and subject to technical advice (Int parent II).
Not young children of 11 years. They're too young to be responsible for the IHC (Int parent I).

Notwithstanding these few negative or cautious opinions, it was quite clear that the bulk of the subjects in all groups supported the notion that there should be opportunities for IH and normal children to mix with each other.

Proposition 1 (Table 4)

I think it is an essential part of my child's education to learn as much as he or she is able about how to get on with children who are not handicapped (IH parents).

I think that an essential part of my child's education should be learning to accept and get on with people who are different in some way from themselves (intermediate parents).

As a teacher, I place high priority on helping children learn to accept and get on with people who are different in some ways from themselves (intermediate teachers).

One of the things we should learn at school is how to accept and get on with people who are different from ourselves (intermediate children)

TABLE 4

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One of the things we should learn at school is how to accept and get on with people who are different from ourselves (intermediate children).

	IH Parents		Int Parents		Int. Children						Int Teachers	
					Boys		Girls		Total			
Series	I	II	I	II	I	II	I	II	I	II	I	II
N	22	19	127	87	80	74	97	95	177	169	10	8
1. Complete agreement	100	89.5	91.3	82.8	72.5	59.5	76.3	84.2	74.6	73.4	100	87.5
2. Agreement with reservations	0	10.5	6.3	17.2	17.5	25.7	21.6	11.6	19.8	17.8	0	12.5
3. Disagreement, but not strong	0	0	0	0	2.5	2.7	2.1	2.1	2.3	2.4	0	0
4. Complete disagreement	0	0	2.4	0	0	2.7	0	0	0	1.2	0	0
5. No opinion	0	0	0	0	7.5	9.5	0	2.1	3.5	5.3	0	0

Statistical Analysis

	X^2	df	p
Series 1*			
Int Parents vs int Children (Cats 3, 4, & 5 collapsed)	13.91	2	<.01
Int Parents vs IH parents (Cats 2, 3, 4 & 5 collapsed)	2.01	1	NS
Boys vs girls (Cats 3, 4 & 5 collapsed)	5.36	2	NS
Series 2*			
Int Parents vs int children (Cats 3, 4 & 5 collapsed)	10.42	2	<.01
Int Parents vs IH parents (Cats 2, 3, 4 & 5 collapsed)	.0053	1	NS
Boys vs girls (Cats 3, 4 & 5 collapsed)	13.45	2	<.01
Series 1 vs Series 2**			
Int Parents (Cats 2, 3, 4 & 5 collapsed)	8.20	1	<.01
Boys (Cats 3, 4 & 5 collapsed)	6.31	2	<.05
Girls (Cats 2,3,4 & 5 collapsed)	3.28	1	NS
Int children (Cats 3, 4 & 5 collapsed)	3.49	2	NS

* X^2 test for two independent samples

** X^2 one-sample test

This proposition, concerned with the school's role in helping handicapped and non-handicapped children get on with each other, met with a high degree of agreement in all of the groups. All except one had over 95 per cent of their members in full or partial agreement, the intermediate boys providing the only deviation from this pattern with 90 per cent and 95.2 per cent agreement respectively on the two occasions.

Comparisons of the scores of the various groups revealed significant differences between intermediate parents and intermediate children on both occasions ($X^2 = 13.91, p < .01$ and $X^2 = 10.42, p < .01$ respectively) and between boys and girls on the second occasions $X^2 = 13.45, p < .01$). For the most part, these reflected differences in the proportions of the subjects in the two categories of agreement.

Shifts over time were recorded for intermediate parents ($X^2 = 8.20, p < .01$) and for the boys ($X^2 = 6.31, p < .05$), both due in the main to shifts away from complete agreement with the proposition on the first occasion to partial agreement on the second occasion.

Expressed reasons for the widespread acceptance of the principle that educational benefits would accrue from the association of handicapped and non-handicapped children fell into four categories:

(i) Equality. Some respondents implied that the IH children were of equal status to non-handicapped children:

> They are no different from us, except they have a small brain problem (Int child II).
> They are human beings, not animals (Int child II).

(ii) "There but by the Grace of God go I". A few respondents, particularly among the intermediate children, argued that since anyone can become handicapped at any time, the handicapped should be treated in the manner in which one would like to be treated oneself:

> One day you might be handicapped and won't be accepted (Int child II).
> ... somewhere in life something might happen to you and you will look different or something (Int child II).

(iii) Preparation for the future. The need to prepare early for future associations between the handicapped and the non-handicapped was commented on, particularly by the intermediate children:

> We will mix with them when we are older, so it is just preparing us for them (Int child I).
> When we are older we are not going to be able to avoid things, so we should learn now (Int child II).
> She has to learn to live with the majority (IH parent II).

(iv) Positive attitudes towards the IH. Several respondents described the effects the experiences would have or have had on engendering positive attitudes towards the intellectually handicapped among the non-handicapped:

> Before I used to be very scared of people who were disabled, now I know they are just as nice and friendly as other children (Int child II).
> People might be able to keep their tempers when they find out what is going on in a handicapped mind (Int child II).
> My boy has learned to accept and not make fun of the handicapped (Int parent II).
> This has been vital in my daughter's case as she has learned tolerance towards other less fortunate children (Int parent II).

Proposition 3 (Table 5)

> The intellectually handicapped children at the school will gain a lot from being with non-handicapped children (IH parents, intermediate parents, intermediate teachers).
>
> The intellectually handicapped children at the school will gain a lot from being with children like ourselves (intermediate children).

Opinion on the benefits to be derived by the IH children associating with normal children were generally positive. All of the parents of the IH children and 80 per cent or more of the members of the other groups affirmed the proposition on both occasions.

Intergroup comparisons showed a significant difference between intermediate parents and the IH parents on the first occasion ($X^2 = 9.12$, $p < .02$), with the latter being rather more completely in agreement with the proposition. A difference was also found between intermediate parents and their children on the second occasion ($X^2 = 10.28$, $p < .02$), this mainly reflecting the latter's rather more equivocal responses.

The only statistically significant shift to be recorded over the two occasions took place with the intermediate parents (χ^2 = 15.49, p <.02). In the main, this reflected a move towards complete agreement with the proposition.

TABLE 5

The intellectually handicapped children at the school will gain a lot from being with non-handicapped children (IH parents, intermediate parents, intermediate teachers).

The intellectually handicapped children at the school will gain a lot from being with children like ourselves (intermediate children).

	IH Parents		Int Parents		Int. Children						Int Teachers	
					Boys		Girls		Total			
Series	I	II	I	II	I	II	I	II	I	II	I	II
N	22	19	127	87	80	74	97	95	177	169	10	8
1. Complete agreement	95.5	89.5	63.0	72.4	53.8	54.1	60.8	53.7	57.6	53.8	40.0	87.5
2. Agreement with reservations	4.5	10.5	24.4	16.1	27.5	27.0	25.8	26.3	26.7	26.6	50.0	0
3. Disagreement, but not strong	0	0	3.1	0	7.5	2.7	3.1	3.2	5.1	3.0	0	0
4. Complete disagreement	0	0	3.9	0	1.3	0	0	2.1	0.6	1.2	0	0
5 No opinion	0	0	5.5	11.5	10.0	16.2	10.3	14.7	10.2	15.4	10.0	12.5

Statistical Analysis

	χ^2	df	p
Series 1*			
Int parents vs int children (Cats 3 & 4 collapsed)	2.68	3	NS
Int parents vs IH parents (Cats 3, 4 & 5 collapsed)	9.12	2	<.02
Boys vs Girls	3.32	4	NS
Series 2*			
Int parents vs int children (Cats 3 & 4 collapsed)	10.28	3	<.02
Int parents vs IH parents (Cats 3,4 & 5 collapsed)	3.11	2	NS
Boys vs Girls	1.66	4	NS
Series 1 vs Series 2**			
Int parents (Cats 3 & 4 collapsed)	15.49	3	<.01
Boys (Cats 3 & 4 collapsed)	5.97	3	NS
Girls (Cats 3,4 & 5 collapsed)	4.23	3	NS
Int children (Cats 3 & 4 collapsed)	5.61	3	NS

* χ^2 test for two independent samples

** χ^2 one-sample test

Perceptions of the benefits to the intellectually handicapped children of being able to mix with non-handicapped children revolved around three issues, all of which were crystallised in the comment of one of the parents of a handicapped child:

> Has some confidence to speak to others, can now go to the shops without a note, not shy and more accepting of handicap.

(i) Knowledge and communication skills were perceived as improving as a result of the contact:

> It makes him talk better and communicate with other children (IH parent II).
> Interactions with non-handicapped children make realistic .. demands on handicapped children to express themselves reasonably to convey meaning for an immediate need or purpose (Int teacher II).
> They have learnt things from being around with us (Int child II).
> They are better spoken and have more common sense; they communicate better (Int child II).

Indeed, one child went even further, claiming that the contacts helped the IH children "to think straight and get well"!

(ii) Social skills were seen as improving by members of all groups of respondents:

> More confidence (IH parent II).
> He talks to other people more readily when he goes out, more confident when going on messages (IH parent II).
> They have learnt how to play our types of games and how to mix in with us (Int child II).
> To have overcome shyness and learnt to make friends (Int child II).
> From what I have seen, the IHC have grown in confidence over the year by mixing with non-handicapped children (Int parent II).

Only one respondent expressed a negative comment, feeling that

> Some of them are learning bad habits, they are still the same as when they came here (Int child II).

(iii) Acceptance of differences by the IH children was thought by some respondents, especially the intermediate children, to be a probable consequence of the mixing:

> They have accepted the way that they are different and they now will maybe able to get on better in the world (Int child II).
> They know now that they are different (Int child II).

Proposition 4 (Table 6)

> The non-handicapped children will gain a lot from being with intellectually handicapped children (IH parents, intermediate parents, intermediate teachers).
> We will gain a lot by being with intellectually handicapped children (intermediate children).

Although support for this proportion was somewhat less than for the preceding one, it was still fairly high, with at least two-thirds of the members of the various groups affirming it. Significant differences were found between the intermediate parents and their children on both occasions ($X^2 = 28.27$, $p < .001$, and $X^2 = 17.68$, $p < .01$), the parents feeling more strongly than their children that the latter would gain or were gaining from being with the IH children. Boys and girls also differed on both occasions, the former being rather more in agreement with the proposition ($X^2 = 10.34$, $p < .05$, and $X^2 = 12.40$, $p < .02$, respectively).

TABLE 6

The non-handicapped children will gain a lot from being with intellectually handicapped children (IH parents, intermediate parents, intermediate teachers).

We will gain a lot by being with intellectually handicapped children (intermediate children).

	IH Parents		Int Parents		Int. Children						Int Teachers	
					Boys		Girls		Total			
Series	I	II	I	II	I	II	I	II	I	II	I	II
N	22	19	127	87	80	74	97	95	177	169	10	8
1. Complete agreement	77.3	63.2	66.1	65.5	36.3	28.4	42.3	48.4	39.5	39.6	80.0	75.0
2. Agreement with reservations	18.2	10.5	22.8	24.1	30.0	33.8	32.0	31.6	31.1	32.5	20.0	25.0
3. Disagreement, but not strong	0	0	3.9	2.3	8.8	14.9	8.2	5.3	8.5	9.5	0	0
4. Complete disagreement	0	0	4.7	2.3	10.0	2.7	0	5.3	4.5	4.1	0	0
5. No opinion	4.5	26.3	2.3	5.7	15.0	20.3	17.5	9.5	16.4	14.2	0	0

Statistical Analysis

	X^2	df	p
Series 1*			
Int parents vs int children	28.27	4	<.001
Int parents vs IH parents (Cats 3, 4 & 5 collapsed)	1.28	2	NS
Boys vs Girls	10.34	4	<.05
Series 2*			
Int parents vs int children	17.68	4	<.01
Int parents vs IH parents (Cats 3 & 4 collapsed)	9.21	3	<.05
Boys vs Girls	12.40	4	<.02
Series 1 vs Series 2**			
Int parents (Cats 3,4 & 5 collapsed)	0.11	2	NS
IH parents (Cats 3 & 4 deleted)	4.00	2	NS
Boys (Cats 3 & 4 collapsed)	3.07	3	NS
Girls (Cats 3 & 4 collapsed)	4.[illegible]	3	NS
Int children	0.86	4	NS

* X^2 test for two independent samples

** X^2 one-sample test

No statistically significant shifts in opinions occured between occasions for any of the groups.

Three major advantages were seen as accruing to the non-handicapped children from their association with the intellectually handicapped children:

(i). The understanding and acceptance of differences came through from many respondents, particularly the intermediate children and their parents:

> We have accepted that these people are hardly any different from us, we are all the same species: human beings (Int child II).
> We know the earth is not made of perfect people like us, but also the disabled and the handicapped (Int child II).
> A greater understanding and awareness of the problems the IHC children have (Int teacher II).
> The closer contact has helped my son realise that the IH child also enjoys playing games; singing and learning, just as he and his friends do; he is prepared to be tolerant and interested in someone different from himself (Int parent II).
> Having a retarded child ourselves we have found that our daughter has come to understand her sister much better. She has shown more patience and understanding and also tolerance than previously. She is more willing to help her sister with schoolwork, play, and most important is not ashamed to introduce her to her friends (Int parent II).

(ii) The enhancement of the self concepts of the intermediate children as a result of the contact was mentioned by several respondents:

> We don't know how lucky we are not being an IHC, with living with them (Int child II).
> It shows us what we are like inside when we meet someone who is different from us (Int child II).
> A better understanding of what they might well have been themselves (Int teacher II).
> Grateful for their own full health (Int parent II).

(iii) The opportunity to nurture was seen by some as a further gain for the intermediate children:

> How to care for other people in your habitat (Int child II).
> Learning to be good to other people and also being able to show someone else something that you have learnt from school (Int child II).
> Mainly tolerance and a nurturant feeling towards those less fortunate (Int parent II).
> Already she felt she had achieved a lot by teaching one particular girl to say 'Mummy and Daddy' which I believe this particular child has never said before (Int parent II).

Proposition 5 (Table 7)

It is well worthwhile including intellectually handicapped children who are older than the usual intermediate age level in this project (IH parents, intermediate parents, intermediate teachers).

It is well worthwhile including intellectually handicapped children who are older than us (intermediate children).

There was mixed support for this proposition, with just over half of both groups of parents and approximately two-thirds of the children affirming it on both occasions. On the first occasion, intermediate parents were less favourably inclined than their children to the idea of having older IH children in the project (54.1 per cent vs 73.3 per cent in favour, respectively, this difference being significant at the .001 level). By the second occasion, however, these two groups had moved closer together, with 56.3 per cent of the parents and 65.9 per cent of the children agreeing with the proposition. Between occasions, then, the intermediate children became a little less sympathetic to the idea of having older IH children in the school, the difference in their attitudes on the two occasions being significant at the .001 level of significance. As can be seen from Table 7, the shifts in attitude took place mainly among the girls (X^2 = 37.11, $p < .001$).

Positive attitudes towards having older IH children in the project centred around the assumption that their mental ages were probably close to those of the intermediate children:

It's OK because they're behind. They're still at our level (Int child I).
Their brains are younger (Int child II).
Older IHC children are not very intelligent, so they know just about as much as us (Int child II).
They only seem as old as us and they play the games we play (Int child II).
Presumably IH children with their lower mental capacity would adapt to such a situation (Int parent II).

Reasons for not having older IH children in the project reflected worries regarding their supposed sexuality and aggressiveness:

They tend to frighten me and scare me half to death when I am not watching (Int child II).
The older ones seem to boss you around (Int child II).
Definitely not, physical differences are too great at this stage (Int parent II).

At intermediate all children are going through adolescence and many body changes; younger or same age IH children are accepted, but older IH children could be ridicules (Int parent II).
Possibly problems might outweigh advantages: violence, sexuality etc (Int teacher II).
Mainly from a sexual point of view, perhaps, because some IH children have less inhibitions than normal children (Int parent II).
The older boys become a bit too friendly with us girls (Int child II).

TABLE 7

It is well worthwhile including intellectually handicapped children who are <u>older</u> than the usual intermediate age level in this project (IH parents, intermediate parents, intermediate teachers).

It is well worthwhile including intellectually handicapped children who are <u>older</u> than us (intermediate children).

	IH Parents		Int Parents		Int. Children						Int Teachers	
					Boys		Girls		Total			
Series	I	II	I	II	I	II	I	II	I	II	I	II
N	22	19	124	87	81	74	95	95	176	169	10	8
1. Complete agreement	50.0	36.8	31.5	28.7	32.1	27.0	33.7	34.7	33.0	31.4	40.0	50.0
2. Agreement with reservations	9.1	21.1	22.6	27.6	39.5	37.8	41.1	31.6	40.3	34.5	50.0	0
3. Disagreement, but not strong	22.7	10.5	11.3	6.9	11.1	10.8	9.5	13.7	10.2	12.4	0	25.0
4. Complete disagreement	9.1	10.5	17.7	13.8	6.2	10.8	2.1	10.5	4.0	10.7	0	0
5. No opinion	9.1	21.1	16.9	23.0	11.1	13.5	13.7	9.5	12.5	11.2	10.0	25.0

Statistical Analysis

	χ^2	df	p
Series 1 *			
Int parents vs int children	22.34	4	<.001
Int parents vs IH parents (Cats 1 & 2, 3 & 4 collapsed)	0.94	2	NS
Boys vs Girls	2.22	4	NS
Series 2 *			
Int parents vs int children	8.29	4	NS
Int parents vs IH parents (Cats 1 & 2, 3 & 4 collapsed)	0.03	2	NS
Boys vs Girls	2.15	4	NS
Series 1 vs Series 2**			
Int parents	5.31	4	NS
IH Parents (Cats 2,3,4 & 5 collapsed).	1.30	1	NS
Boys	3.62	4	NS
Girls	37.11	4	<.001
Int children	21.59	4	<.001

* χ^2 test for two independent samples

** χ^2 one-sample test

Proposition 6 (Table 8)

> It is well worthwhile including intellectually handicapped children who are younger than the usual intermediate age level in this project (IH parents, intermediate parents, intermediate teachers).
> It is well worthwhile including intellectually handicapped children who are younger than us (intermediate children).

This proposition was supported on both occasions by just over half of both groups of parents and approximately three-quarters of the intermediate children. As with proposition 5, on the first occasion the intermediate parents were less favourably inclined than their children towards the idea of having younger IH children in the project, with 50.8 per cent of the former and 77.9 per cent of the latter agreeing with the proposition. By the second occasion, however, the intermediate parents and their children had moved towards each other with 56.3 per cent and 75.7 per cent, respectively, in favour of the proposition. As can be seen in Table 8, whereas the shifts in attitudes among the intermediate parents over the two occasions were statistically significant ($X^2 = 9.64$, $p < .05$), those of the intermediate children were not ($X^2 = 8.10$).

Reasons for accepting the presence of younger intellectually handicapped children in the project covered a wide range, although many comments from the intermediate children clustered around a nurturance theme:

> The little kids feel so playful to us and we love them all (Int child II).
> I very much enjoy playing with young children and like playing mother to them (Int child II).
> When I get older I might have a handicapped baby and I will know how to handle it (Int child II).
> The older children are more able to offer help to the younger ones (Int parent II).
> I can talk to the younger ones better than to the older ones (Int child II).
> It is easier to play and read to them (Int child II).
> The normal child will gain a better overall understanding of the IH if they can see the development of IH through a wide age range (IH parent II).
> They may learn to fix their illness by looking at us (Int child II).
> Had our daughter had this advantage earlier she would have developed better behaviour patterns (IH parent II).
> From a practical point of view it must be more economical to have these units in a few schools - therefore to have some younger and some older is inevitable (Int parent II).

TABLE 8

It is well worthwhile including intellectually handicapped children who are younger than the usual intermediate age level in this project (IH parents, intermediate parents, intermediate teachers).

It is well worthwhile including intellectually handicapped children who are younger than us (intermediate children).

	IH Parents		Int Parents		Int Children						Int Teachers	
					Boys		Girls		Total			
Series	I	II	I	II	I	II	I	II	I	II	I	II
N	21	19	124	87	81	74	95	95	176	169	10	6
1. Complete agreement	47.6	57.9	28.5	31.0	42.0	35.1	50.5	56.8	46.6	47.3	30.0	25.0
2. Agreement with reservations	14.3	0	15.3	25.3	29.6	29.7	32.6	27.37	31.3	28.4	30.0	50.0
3. Disagreement, but not strong	23.8	15.8	12.1	10.3	8.6	10.8	8.4	6.3	8.5	8.3	20.0	0
4. Complete disagreement	4.8	5.3	13.7	6.9	8.6	4.0	2.1	1.1	5.1	2.4	10.0	12.5
5. No opinion	9.5	21.1	23.4	26.4	11.1	20.3	6.3	8.4	8.5	13.6	10.0	12.5

Statistical Analysis

	χ^2	df	p
Series 1.*			
Int parents vs int children	27.71	4	<.001
Int parents vs IH parents (Cats 1 & 2, 3 & 4 collapsed)	2.13	2	NS
Boys vs girls	5.65	4	NS
Series 2*			
Int parents vs int children	7.92	4	NS
Int parents ve IH parents (Cats 1 & 2, 3 & 4 collapsed)	0.31	2	NS
Boys vs girls	4.81	4	NS
Series 1 vs Series 2**			
Int parents	9.64	4	<.05
IH parents (Cats 1 & 2, 3, 4 & 5 collapsed)	0.13	1	NS
Boys	8.64	4	NS
Girls (Cats 3, 4 & 5 collapsed)	1.62	2	NS
Int children	8.10	4	NS

* χ^2 test for two independent samples

** χ^2 one-sample test

Concerns expressed about the presence of younger IH children were generally mild and tentative compared with those expressed in relation to older children:

> The smaller children may be among bigger intermediate children and get hurt in the rough play (Int parent II).
> No problem except a tendency to be 'over-mothered' by intermediate girls at times (Int parent II).
> The younger ones become too attached to you (Int child II).
> They can be a bit of a nuisance (Int child II).
> If they hear us talking about different things that they haven't learnt they might get frustrated (Int child II).
> Most young ones are scared of us (Int child II).

Proposition 7 (Table 9)

> My child will not be happy in the less sheltered situation of an intermediate school (IH parents).
>
> Intellectually handicapped children will not be happy in the less-sheltered situation of an intermediate school (intermediate parents, intermediate teachers).

This proposition was emphatically rejected by all three groups of respondents on both occasions. Statistically significant shifts in attitudes were observed for both groups of parents between the two occasions. The parents of IH children moved from a spread of opinions on the first occasion to near unanimity in rejecting the proposition on the second occasion ($X^2 = 6.95$, $p < .05$). The opinions of the intermediate parents also underwent a dramatic shift, with 33.3 per cent agreeing with the proposition on the first occasion, compared with only 12.7 per cent on the second. It must be noted, however, that much of the shift for intermediate parents went in the direction of 'no opinion' (11.9 vs 40.2 per cent for the first and second occasions, respectively). The foregoing shifts were also reflected in a significant difference between the two groups of parents on the second occasion ($X^2 = 14.92$, $p < .001$).

Comments on this question on the second occasion by the parents of the intellectually handicapped included the following gradation of opinion:

> My child was quite happy at all the schools she attended.
> A handicapped child needs to start from a sheltered school and work his way up. They enjoy the improvement they have made.
> I asked my child if he was happy at his school, he said yes he likes it very much.
> Our son hasn't been happier, he is thriving on the experiment.
> He is much happier at this school and hates to miss attending.

The parents of the intermediate children commented along the following lines on the second occasion:

> This must depend on the attitudes of the children and staff of the intermediate school.
> I would agree with this if they are having fun poked at them; in general the children at St Andrews are giving these children a pretty fair go.
> I have no evidence except that the children look and sound happy whenever I am at the school.
> We have no direct knowledge concerning any unhappiness. Certainly, from what our son is continuously reporting, these children are happy where they are.

TABLE 9

My chil will not be happy in the less sheltered situation of an intermediate school (IH parents).

Intellectually handicapped children will not be happy in the less-sheltered situation of an intermediate school (intermediate parents, intermediate teachers).

	IH Parents		Int Parents		Int Teachers	
Series	I	II	I	II	I	II
N	21	19	126	87	10	8
1. Complete agreement	14.3	0	12.7	7.0	0	0
2. Agreement with reservations	9.5	0	20.6	5.7	0	0
3. Disagreement, but strong	4.8	15.8	31.0	16.1	30.0	0
4. Complete disagreement	71.4	73.7	23.8	31.0	40.0	87.5
5. No opinion	0	10.5	11.9	40.2	30.0	12.5

Statistical Analysis

	x^2	df	p
Series 1*			
Int parents vs IH parents (Cats 1 & 2, 3 & 4 collapsed)	4.44	2	NS
Series 2*			
Int parents vs IH parents (Cats 1 & 2, 3 & 4 collapsed)	14.92	2	<.001
Series 1 vs Series 2**			
Int parents	78.49	4	<.001
IH parents (Cats 1 & 2, 3 & 4 collapsed)	6.95	2	<.05

* x^2 test for two independent samples

** x^2 one-sample test

Proposition 8 (Table 10)

> The special needs of intellectually handicapped children would be better met in a school located in its own grounds (IH parents, intermediate parents, intermediate teachers).

Not surprisingly, in the light of the preceding data, this proposition found little support among either groups of parents or the intermediate teachers on either occasion. There was, however, a shift in attitude between the two occasions for both parent groups ($X^2 = 12.45$, $p < .02$ for the intermediate parents; $X^2 = 8.58$, $p < .01$ for the parents of the

the IH), mainly in the direction of becoming less equivocal in their level of disagreement with the proposition.

TABLE 10

The special needs of intellectually handicapped children would be better met in a school located in its own grounds.

	IH Parents		Int Parents		Int Teachers	
Series	I	II	I	II	I	II
N	22	19	125	87	10	8
1. Complete agreement	4.5	5.3	21.6	12.6	0	0
2. Agreement with reservations	13.6	0	11.2	9.2	10	0
3. Disagreement, but not strong	36.4	10.5	31.2	30.0	10	37.5
4. Complete disagreement	45.5	78.9	28.0	43.7	40	62.5
5. No opinion	0	5.3	8.0	4.6	40	0

Statistical Analysis

	X^2	df	p
Series 1*			
Int parents vs IH parents (Cats 1 & 2 collapsed)	4.71	3	NS
Series 2*			
Int parents vs IH parents (Cats 1 & 2 collapsed)	4.63	3	NS
Series 1 vs Series 2**			
Int parents	12.45	4	<.02
IH parents (Cats 1, 2, 3, & 5 collapsed)	8.58	1	<.01

* X^2 test for two independent samples

** X^2 one-sample test

The range of reasons for disagreeing with this notion of meeting the special needs of intellectually handicapped children in a school located in its own grounds included the following:

> She has to learn to live with the majority (IH parent II).
> There must be as much experience as possible in meeting other people and situations as preparation for leading as full a life as possible (Int teacher II).
> It is essential that IH children mix with other children so that they may gain confidence which will help in later life (Int parent II).

Proposition 9 (Table 11)

> My child might be a bit scared of being among intellectually handicapped children (intermediate parents).
>
> I am a bit scared of being among intellectually handicapped children (intermediate children).

The intermediate children generally rejected this proposition on both occasions, with one-third or less completely agreeing with it or agreeing with reservations. There were no significant differences between boys and girls in their distribution on this variable. Intermediate parents were even more emphatic than their children in rejecting the proposition, there being significant differences between these two groups on both the first and second occasion ($X^2 = 15.37$, $p < .01$; $X^2 = 33.46$, $p < .001$, respectively). The parents showed a significant between-occasion shift ($X^2 = 15.75$, $p < .01$), with a move from 31.0 per cent agreement on the first occasion to 15.9 per cent on the second.

Several parents commented on what they perceived to be changed attitudes in their children with respect to this variable:

> Initially my daughter was afraid but has overcome this almost entirely.
> At first, yes, but now accepts them and ignores them.
> Her initial fear was rapidly dispelled.
> Not any longer, although he used to be before attending St Andrews.

Many children also commented on changes in their attitudes over the year:

> I have got used to them being around the school and I can talk to them.
> I used to be scared but not now.
> We have a lot of fun, but you've got to get used to them.
> Not now that I know what they are like.
> At first I was, but now I'm not, it helped me to understand them when we had an IHC study.

Three parents made comments which might throw some light on the apparent discrepancy between the perceptions of the intermediate parents and their children:

> If the IH children got a little "excited" my children get a little worried.

My daughter finds something disturbing but not from fright, more from compassion which is not a bad thing altogether.... Perhaps this is due to a paradoxical situation. On the one hand they are asked to treat the children as normal in a play situation, but when the children behave in an irrational manner they are expected to make allowances for them.

TABLE 11

My child might be a bit scared of being among intellectually handicapped children (intermediate parents).

I am a bit scared of being among intellectually handicapped children (intermediate children).

	Int Parents		Int children					
			Boys		Girls		Total	
Series	I	II	I	II	I	II	I	II
N	126	87	81	74	97	95	178	169
1. Complete agreement	15.1	12.6	12.3	10.8	11.3	3.2	11.8	6.5
2. Agreement with reservations	15.9	2.3	16.0	13.5	23.7	27.4	20.2	21.3
3. Disagreement, but not strong	14.3	13.8	19.8	25.7	17.5	23.2	18.5	24.3
4. Complete disagreement	53.2	67.8	39.5	36.5	37.1	39.0	38.2	37.9
5. No opinion	1.6	3.4	12.3	13.5	10.3	7.4	11.2	10.1

Statistical Analysis

	χ^2	df	p
Series 1 *			
Int parents vs int children	15.37	4	<.01
Boys vs Girls	1.67	4	NS
Series 2 *			
Int parents vs int children	33.46	4	<.001
Boys vs Girls	9.23	4	NS
Series 1 vs Series 2**			
Int parents	15.75	4	<.01
Boys	1.[illegible]	4	NS
Girls	8.77	4	NS
Int children	7.30	4	NS

* χ^2 test for two independent samples

** χ^2 one-sample test

These comments suggest that the intermediate children might be attaching several meanings to the term 'scared' - a factor which could have led to some exaggeration in their responses to the question, compared with their parents. This possibility was borne out in some of the comments made by children who agreed with the proposition on the second occasion:

They make faces and run after you.
They jump out at you and give you a fright.
They seem to pretend to do something but then they change their minds.
Especially the older boys, they are stupid and run after you.
They are sometimes trouble makers.
I am a bit scared when we play Rugby, when you take them by the legs and they swing their arms and hit you.
They might do something wrong.

While the foregoing might seem relatively trivial justifications, some of the intermediate children seem to have more serious concerns:

It is not necessary for some of the older boys to be here as some of the things they do or say are hurtful.
Some of the handicapped boys tickle you and annoy you, others hug you and don't let go.
They sometimes get rough.
They beat you up.
They kick you like -- kicked a boy in the stomach for nothing.
Some of them always want to fight.
You never know when they are going to clobber you.

The preponderance of comments from the intermediate children, however, took a quite different tack:

You just need to be nice to them and you won't be scared.
There should be no reason for anyone to be scared of them.
They are very affectionate and want friends. I see them every day.
Because I have been to Tokanui Hospital and I know a few people.
I'm not because my cousin is an IHC.
I'm not scared because I have an IHC brother and I love him, I don't hate him because of what he is.

Proposition 10 (Table 12)

I am not sure how to talk to intellectually handicapped children (intermediate children).

Although this proposition found moderate support from the intermediate children on the first occasion, with nearly one-half of them (45.5 per cent) in complete or partial agreement, it was completely rejected on the second occasion when only just over one quarter of them (26.6 per cent) were in agreement. This between-occasion shift was statistically significant for both boys and girls ($X^2 = 15.32$, $p < .01$; $X^2 = 44.57$, $p < .001$, respectively).

TABLE 12

I am not sure how to talk to intellectually handicapped children.

	Int Children					
	Boys		Girls		Total	
Series	I	II	I	II	I	II
N	81	74	95	95	176	169
1. Complete agreement	18.5	6.8	14.7	6.3	16.5	6.5
2. Agreement with reservations	30.9	28.4	27.4	13.7	29.0	20.1
3. Disagreement, but not strong	16.0	20.3	21.1	20.0	18.8	20.1
4. Complete disagreement	17.3	31.1	20.0	46.3	18.8	39 6
5. No opinion	17.3	13.5	16.8	13.7	17.0	13.6

Statistical Analysis

	x^2	df	p
Series 1*			
Boys vs Girls	1.33	4	NS
Series 2*			
Boys vs Girls	6.91	4	NS
Series 1 vs Series 2**			
Boys	15.32	4	<.01
Girls	44.57	4	<.001
Int children	55.97	4	<.001

* x^2 test for two independent samples

** x^2 one-sample test

Many children asserted that it is not difficult talking to the intellectually handicapped, although some pointed out the necessity to adjust their speech to take account of limited comprehension:

> It is all right if you talk nicely and ask suitable questions (Int child I).
> You have to talk to them as if they were five year olds which can sometimes be difficult (Int child II).
> If you speak as you would to a six or seven year old they understand quite easily (Int child II).
> I have learnt how to communicate with them and it is very interesting (Int child II).

The difficulties encountered by the IH in their expressive language was also commented on:

> I don't understand their language (Int child II).
> They do speak differently from us (Int child II).
> They mumble words and you don't know how to answer (Int child II).
> You can't understand some of the children and they get frustrated (Int child II).

Proposition 11 (Table 13)

> I would only play with the intellectually handicapped children if my friends did (intermediate children).

This proposition was overwhelmingly rejected by the intermediate children on both occasions, but even more emphatically on the second occasion when only 21.3 per cent agreed with it, compared with 28.1 per cent on the first occasion. The statistically significant differences for all children for these two occasions (X^2 = 44.92, p .001) reflected not only the above shift, but a shift away from 'no opinion' category (20.8 vs 7.1 per cent) and towards the 'complete disagreement' category (32.0 vs 54.4 per cent). Boys and girls revealed similar shifts in their attitudes on this variable between occasions (X^2 = 11.86, p <.02; X^2 = 27.10, p <.001, respectively). However, differences between boys' and girls' patterns of responses occurred in the second occasion (X^2 = 9.67, p <.05), but not on the first. This result reflected the higher proportion of boys than girls who agreed with the proposition (29.8 per cent vs 14.7 per cent, respectively).

Reasons for rejecting this proposition tended to revolve around feelings of compassion for the handicapped, an assertion of social independence, or a mixture of both:

> Too bad about my friend! (Int child I).
> I don't care what my friends think, I would play with him (Int child I).
> It is my own choice if I want to play with them and most of the time I do (Int child II).
> I feel free to talk and read to them whenever I want to (Int child II).
> Sometimes when my friends are sick they are good to play with (Int child II).

The IHC need friendship and understanding so I play with them myself (Int child II).

TABLE 13

I would only play with the intellectually handicapped children if my friends did.

	Int Children					
	Boys		Girls		Total	
Series	I	II	I	II	I	II
N	81	74	97	95	178	169
1. Complete agreement	13.6	12.2	8.2	4.2	10.7	7.7
2. Agreement with reservations	18.5	17.6	16.5	10.5	17.4	13.6
3. Disagreement, but not strong	17.3	20.3	20.6	14.7	19.1	17.2
4. Complete disagreement	28.4	41.9	35.1	64.2	32.0	54.4
5. No opinion	22.2	8.1	19.6	6.3	20.8	7.1

Statistical Analysis

	x^2	df	p
Series 1*			
Boys vs Girls	2.30	4	NS
Series 2*			
Boys vs Girls	9.67	4	<.05
Series 1 vs Series 2**			
Boys	11.86	4	<.02
Girls	37.10	4	<.001
Int children	44.92	4	<.001

* x^2 test for two independent samples

** x^2 one-sample test

Proposition 12 (Table 14)

All things considered, I think an integration scheme like this is a good idea (IH parents, intermediate parents, intermediate teachers).

When I think about it, I would say it is a good idea to have intellectually handicapped children in our school (intermediate children).

One of the final propositions placed before the respondents on both occasions, this was intended to gauge the level of support for the project after the respondents had been required to think about several of the issues

involved. As can be seen from Table 14, and as one might have expected from the reactions to the earlier propositions, all groups of respondents shared a very high degree of support for this project in general. When the two categories of 'complete agreement' and 'agreement with reservations' were combined, the range of scores went from a low of 77.0 per cent for intermediate boys on the second occasion to a high of 100 per cent for IH parents in the first occasion and the intermediate teachers on the second. Significant differences occurred in the distribution of the responses of the two parent groups on the first occasion ($X^2 = 9.75$, $p < .01$), with the IH parents being more emphatic in their agreement. The intermediate children and their parents differed on the second occasion ($X^2 = 13.97$, $p < .01$), the former being more equivocal in their agreement with the proposition. Significant between - occasion shifts in the positive direction were recorded for the intermediate parents ($X^2 = 11.58$, $p < .01$). Surprisingly, however, the intermediate girls, and the intermediate children as a group, showed a significant shift in the negative direction ($X^2 = 11.09$, $p < .02$) from the first to the second occasion.

The reasons for these generally high levels of support for the project have already been presented in the discussion of the earlier propositions; it will suffice at this point to quote one example from each of the major groups of respondents:

> There should be more schools like St Andrews throughout New Zealand. Only good could come of a scheme like this (Int parent II). I was not happy about the scheme at first but can see now that it has advantages both for the handicapped and non-handicapped (Int parent II).
> I hope that boundaries are not set around the new IHC school at present being built - all the good evident throughout the year would be undone in such a short time (Int teacher II).
> We should have IH children at this school and other schools instead of having them all put together in one place (Int child II).

TABLE 14

All things considered, I think an integration scheme like this is a good idea (IH parents, intermediate parents, intermediate teachers).

When I think about it, I would say it is a good idea to have intellectually handicapped children in our school (intermediate children).

	IH Parents		Int Parents		Int Children						Int Teachers	
					Boys		Girls		Total			
Series	I	II	I	II	I	II	I	II	I	II	I	II
N	22	18	127	87	81	74	95	95	176	169	10	8
1. Complete agreement	95.5	94.4	61.4	78.2	46.9	45.9	60.0	63.2	54.0	55.6	80.0	87.5
2. Agreement with reservations	4.5	0	29.9	13.8	33.3	31.1	27.4	15.8	30.1	22.5	10.0	12.5
3. Disagreement, but not strong	0	0	1.6	3.4	2.5	6.8	5.3	5.3	4.0	5.9	0	0
4. Complete disagreement	0	0	3.9	2.3	1.2	4.1	0	5.3	0.6	4.7	0	0
5. No opinion	0	5.6	3.1	2.3	16.0	12.2	7.4	10.5	11.4	11.2	10.0	0

Statistical Analysis

	χ^2	df	p
Series 1 *			
Int parents vs intermediate children (Cats 3 & 4 collapsed)	7.14	3	NS
Int parents vs IH parents (Cats 3, 4 & 5 collapsed)	9.75	2	<.01
Boys vs Girls	6.83	4	NS
Series 2 *			
Int parents vs intermediate children (Cats 3 & 4 collapsed)	13.97	3	<.01
Int parents vs IH parents (Cats 3, 4 & 5 collapsed)	3.09	2	NS
Boys vs Girls	6.93	4	NS
Series 1 vs Series 2 **			
Int parents (Cats 3, 4 & 5 collapsed)	11.58	2	<.01
Boys (Cats 3, 4 & 5 collapsed)	0.47	2	NS
Girls (Cats 3 & 4 collapsed)	11.09	3	<.02
Int children (Cats 3 & 4 collapsed)	17.21	3	<.001

* χ^2 test for two independent samples

** χ^2 one-sample test

2. PLAYGROUND OBSERVATIONS

Time Spent in Various Zones

Table 15.1 shows the mean percentages of the time spent in the various school zones by the younger and older IH children over the first and second series (refer to Appendix B for the plan of the campus). No data were collected on this variable for the third series because by then the IH children had been re-located in their own school in the campus. From this table it can be seen that significant shifts in the use of zones occurred between series for both groups of children. Compared with the first series, in the second series of observations the younger IH children were found less often in the outer zone and more often in the middle zone, whereas the older children spent rather more time in the outer zone and less time in the library. In the former case this may well have been due to the decline in the frequency with which the intermediate children took the younger IH children for walks in the playground, while the latter findings could reflect a growing confidence of the older IH children in utilising their environment.

TABLE 15.1

Wilcoxon matched-pairs signed-ranks for series comparisons of time spent by IH children in various zones (mean percentages)[1]

	Younger					Older				
Zone	Series I	Series II	N[2]	T	p	Series I	Series II	N[2]	T	p
Home room	40.2	40.8	8	17	NS	25.0	27.0	7	12	NS
Library	16.6	12.6	7	8	NS	34.6	8.4	6	0	<.05
Middle	14.4	35.9	8	2	<.02	20.8	29.6	7	5	NS
Outer	28.8	10.9	8	2	<.02	19.5	34.9	7	2	<.05
Total	100.0	100.0				100.0	100.0			

[1] Data not collected for Series III

[2] Variations due to tied ranks

While there were no significant differences on the first occasion between the younger and older children in the time they spent in the various zones, in the second occasion the younger children used the library more and spent less time in the outer zone than did the older children (Table 15.2).

TABLE 15.2

Mann Whitney U test for younger-older comparisons of time spent by IH children in various zones (mean percentages)

	Series I				Series II			
Zone	Younger	Older	U	p	Younger	Older	U	p
Home room	40.2	25.0	15	NS	40.8	27.0	15	NS
Library	16.6	34.6	18	NS	12.6	8.4	7	<.01
Middle	14.4	20.8	27	NS	35.9	29.6	23	NS
Outer	28.8	19.5	17	NS	10.9	34.9	10	<.02
Total	100.0	100.0			100.0	100.0		

Type of Activity Engaged in by IH Children

From Table 16.1 it can be seen that, with the exception of a decline in 'passive participation' behaviours engaged in by the younger IH children over the three series, there were no significant changes in the proportion of time spent in the various activities for either group of children.

TABLE 16.1

Friedman two way analysis of variance for series comparisons of type of activity engaged in by IH children (mean percentage)

	Young (N=7)					Older (N=7)				
Activity	Series I	Series II	Series III	X^2_r	p	Series I	Series II	Series III	X^2_r	p
Formal/Informal games	11.8	4.9	14.4	3.53	NS	13.0	19.0	6.3	3.10	NS
Unstructured play	7.1	13.0	20.0	3.09	NS	3.8	17.4	10.2	2.03	NS
Communication	35.5	33.6	32.5	4.17	NS	43.5	28.0	49.8	3.74	NS
Passive participation	12.6	20.1	24.1	9.96	<.01	14.9	17.3	20.9	0.31	NS
Onlooker/Non Interactive	33.1	28.4	9.0	5.46	NS	24.8	18.3	12.8	4.60	NS
Total	100.0	100.0	100.0			100.0	100.0	100.0		

Table 16.2 shows that younger and older children did not differ with respect to the time they spent in the various activities, when the data for each group were pooled for all three series of observations.

TABLE 16.2

Mann Whitney U test for younger-older comparisons of activities engaged in by IH children (pooled data for all three series)

Activity	Younger	Older	U	P
Formal/Informal games	10.5	12.8	24	NS
Unstructured play	12.6	10.5	21	NS
Communication	33.9	40.4	14	NS
Passive participation	17.8	17.7	18	NS
Onlooker/Non Interactive	25.2	18.7	14	NS
Total	100.0	100.0		

Given the lack of statistically significant differences as outlined above, it is possible to combine the data for both groups over the three series of observations. The broad pattern that emerges when this is done is shown in Table 16.3, from which it can be seen that for an average of approximately 60 per cent of the observations the IH children were engaged in active interaction in the form of games (11.6 per cent), unstructured play (11.6 per cent) and communication activities (37.2 per cent).

Table 16.3

Broad summary of activities engaged in by all IH children (mean of individuals' scores over the three series) (N=14)

Activity	
Formal/Informal games	11.6
Unstructured play	11.6
Communication	37.2
Passive participation	17.7
Onlooker/Non Interactive	21.9
Total	100.0

Social Contexts of IH Children's Activities

The proportion of time the IH children spent playing alone, in pairs or in a group is shown in Tables 17.1 and 17.2. From the former, it can be seen that there was a significant trend for the younger IH children's interactive group play to increase and their non-interactive group play to decrease over the three series. The time spent by the older IH children in activities

involving pairs decreased, with a corresponding increase in interactive group play.

TABLE 17.1

Friedman two way analysis of variance for series comparisons of social contexts of IH children's activities (mean percentages)

	Younger					Older				
Social Context	Series I	Series II	Series III	X^2_r	p	Series I	Series II	Series III	X^2_r	p
Solo	7.3	3.2	6.5	3.06	NS	6.7	2.9	10.2	1.56	NS
Pair	50.1	35.4	23.8	3.00	NS	46.7	26.1	8.7	12.32	<.001
Group (Non Interactive)	26.3	25.8	6.5	7.00	<.05	18.7	15.4	12.8	2.81	NS
Group (Interactive)	16.2	35.5	63.1	9.00	<.01	27.8	55.5	68.4	6.03	<.05
Total	100.0	100.0	100.0			100.0	100.0	100.0		

Table 17.2 shows that when the data for all three series were pooled for each group, the younger IH children were found to spend more time in pair activities than the older IH children and less time in interactive group activities. These results, of course, have to be treated cautiously, given that some of the social context preferences were not stable for either group over the three series (see Table 17.1).

TABLE 17.2

Mann Whitney U test for younger-older comparisons of social contexts of IH children's activities (pooled data for all three series)

Social Contact	Younger	Older	U	p
Solo	5.7	6.6	23	NS
Pair	36.5	27.2	4	<.002
Group (Non Interactive)	19.6	15.6	26	NS
Group (Interactive)	38.3	50.6	12	<.05
Total	100.0	100.0		

Composition of Social Units

When the composition of the social units in which the IH children carried out their activities were analysed no significant changes emerged for either the older or younger children over the three sessions (Table 18.1).

TABLE 18.1

Friedman two way analysis of variance for series comparisons of social units in which IH children were present (mean percentages)

	Younger (N=8)					Older (N=7)				
Composition of social unit[1]	Series I	Series II	Series III	X^2_r	p	Series I	Series II	Series III	X^2_r	p
Other IH chn only	65.0	72.1	65.6	3.0	NS	34.2	41.6	60.1	2.03	NS
Intermediate children	32.0	18.0	14.6	4.0	NS	39.2	49.3	19.6	3.74	NS
Teacher	3.0	9.9	19.8	3.25	NS	26.6	9.1	20.3	2.02	NS

[1] All social contacts, except solo (see Table 17.1) and contacts with observer.

Table 18.2, however, shows that there were statistically significant differences between the two groups when the data for the three series were pooled, with the younger children tending to spend more time in social units comprising other IH children only (mean percentages of 67.6 and 45.3 for younger and older, respectively). Correspondingly, the older IH children spent more time than the younger in contact with intermediate children (36.1 per cent vs 21.5 per cent) and with teachers (18.6 per cent and 10.9 per cent).

TABLE 18.2

Mann Whitney U test for younger-older comparisons of social units in which IH children were present (pooled data for all three series)

Composition of ocial unit	Younger	Older	U	p
Other IH children only	67.6	45.3	4	<.002
Intermediate children	21.5	36.1	5	<.003
Teacher	10.9	18.6	13	<.05
Total	100.0	100.0		

Contacts' Responses to IH Children

Analysis of the responses elicited by the IH children when they were in contact with other persons (intermediate children, teachers and other IH children) reveals a pattern which is generally consistent from the first to the second series of observations for both groups (see Table 19.1).

TABLE 19.1

Wilcoxon matched-pairs signed-ranks test for series comparisons of contacts' responses to IH children in pairs or groups (mean percentages)[1]

	Younger					Older				
Contacts' responses	Series I	Series II	N[2]	T	p	Series I	Series II	N	T	p
Positive	67.2	54.8	8	8	NS	57.3	54.4	7	5	NS
Negative	3.0	5.0	6	8	NS	6.0	6.0	7	9	NS
Neutral	29.8	40.3	8	15	NS	36.8	39.5	7	13	NS
Total	100.0	100.0				100.0	100.0			

[1]Data not collected for Series III

[2]Variations due to tied ranks

When the data on contacts' responses were pooled for the two series, no significant differences between the two age groups emerged (Table 19.2). The overall pattern that was present, then, showed a preponderance of positive responses (58.4 per cent, overall) or neutral responses (36.7 per cent), with only 5.0 per cent of the responses being rated as negative.

TABLE 19.2

Mann Whitney U test for younger-older comparisons of contacts' responses to IH children in pairs or groups (pooled data for Series I and II)[1]

Contacts' responses	Younger	Older	U	p
Positive	61.0	55.9	16	NS
Negative	4.0	6.0	19	NS
Neutral	35.1	38.2	27	NS
Total	100.0	100.0		

[1]Data not collected for Series III

IV. SUMMARY AND CONCLUSIONS

This project comprised an evaluation of an educational arrangement in which a group of moderately subnormal (IH) children retained their own identity for instructional purposes but were, at the same time, given regular opportunities for social interaction with non-handicapped children and their teachers in an intermediate school setting.

Surveys were made of the attitudes of the non-handicapped children and their teachers and of the parents of the IH and the non-handicapped children shortly after the commencement of the scheme and again towards the end of its first year of operation. The results of these surveys indicated uniformly high rates of acceptance of the principles and practices of the integration project among all of the major groups of respondents on both occasions. These results were typified by the responses on the second occasion to the general proposition that the project was a good idea. When the categories of "complete agreement" and "agreement with reservations" were combined, support for the proposition was given by just over 90 per cent of the parents of both groups of children, by 77 per cent of the non-handicapped children and by 100 per cent of the intermediate teachers. These positive findings are consistent with those reported by Bird (1979), Cronk (1978), Page, Broadley and Blair (1981), and Stewart (1980).

Observations of playground behaviours were carried out on three separate occasions - once shortly after the commencement of the scheme, again towards the end of the first year and, finally, near the end of the second year. Included in this analysis was the finding that the IH children, on average, spent 60 per cent of their time in active interaction, with a significant tendency for them to increase their rates of participation in group activities over the three occasions. While the younger IH children spent an average of just over one-fifth of their time in social units that included non-handicapped children, the older IH children spent over one-third of their time in such units. Less than 10 per cent of the interactions elicited negative responses from the non-handicapped children. The general pattern of social interactions between the two groups of children are in accord with the findings of Fredericks et al. (1978) and of Page, Broadley and Blair

(1981).

The study reported in this paper throws little light on the influence the integration scheme might have had on the IH children's intellectual or motor development, nor does it attempt to elucidate the factors that might have contributed to the results. Some comments regarding both of these areas are presented in a paper by the principal of the special school during the time the study was being conducted (see Appendix D).

The results of the study suggest that this limited form of integration is widely acceptable in prospect and after some actual experience of it by non-handicapped intermediate pupils, their parents and teachers, and by the parents of IH children. If these results are typical of what might emerge in other places, they raise the issue of whether we should continue to educate most of our IH children in special schools that provide minimal opportunities for mixing with non-handicapped children. They even raise the question of whether the form of integration reported in this study represents the limits of what might be found acceptable to children, parents, and teachers.

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APPENDIX A

FIRST QUESTIONNAIRE FOR PARENTS OF INTERMEDIATE CHILDREN

School of Education,
University of Waikato,
February, 1977.

Dear

You are probably aware that about 24 intellectually handicapped children have been placed at St. Andrews Intermediate School, until their own school is built in the same grounds as the intermediate. These children, whose ages range from five to seventeen years, will have their own teachers and facilities, but will have opportunities for mixing with the intermediate children in a variety of ways.

Since this is the first time such a large group of intellectually handicapped children has been placed in an intermediate school, we are anxious to evaluate various aspects of the project.

In order that we can obtain information from the various groups of people who are directly or indirectly involved, we will be seeking the opinions of teachers, parents and the intermediate children. We would be very grateful, therefore, if you would complete the attached questionnaire and return it in the enclosed envelope.

We are sure you will appreciate the need for objective data on various aspects of the project and sincerely hope that you will take the few minutes to complete the questionnaire. Please note that you are not asked for your name; your anonymity will be preserved. We would be quite happy for the questionnaire to be filled in by either or both parents.

Yours sincerely,

D.R. Mitchell,
Senior Lecturer in Education.

P.S. If you have any queries about the project, please contact Mr. Laybourn, Principal of St. Andrews Intermediate School, or Mrs. Mitchell, Principal of the Hamilton North Special School.

ENCL:

UNIVERSITY OF WAIKATO.

SCHOOL OF EDUCATION.

ST. ANDREWS INTERMEDIATE/HAMILTON NORTH SPECIAL SCHOOL QUESTIONNAIRE FOR PARENTS OF INTERMEDIATE CHILDREN.

Instructions.

First of all, please put a tick in the appropriate boxes:

My child is a boy ☐
girl ☐

My child is in F.I ☐
F.II ☐

And now place ticks in the appropriate box after each of the statements in the rest of the questionnaire.

The numbers alongside each box refer to the following:

1 I completely agree with the statement,

2 I agree, but have some reservations about it,

3 I disagree with the statement, but not strongly,

4 I completely disagree with it,

5 I do not have an opinion about it.

Please note that space for comment is allowed after each question. If you would like to explain the reasons behind your opinions, we would be pleased to know them.

1. It is the community's responsibility to provide opportunities for intellectually handicapped and non-handicapped children to mix with each other

1	2	3	4	5

Comment:

2. I think that an essential part of my child's education should be learning to accept and get on with people who are different in some way from themselves.

1	2	3	4	5

Comment:

3. The intellectually handicapped children at the school will gain a lot from being with non-handicapped children.

1	2	3	4	5

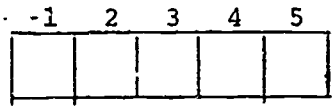
Comment:

4. The non-handicapped children at the school will gain a lot from being with the intellectually handicapped children.

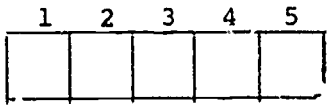
1	2	3	4	5

Comment:

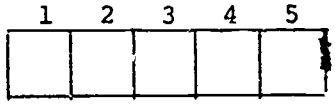
5. Intellectually handicapped children will not be happy in the less-sheltered situation of an intermediate school.
Comment:



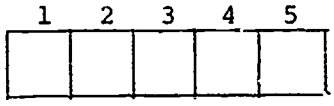
6. My child might be a bit scared of being among intellectually handicapped children.
Comment:



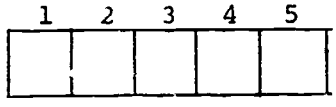
7. The special needs of intellectually handicapped children would be better met in a school located in its own grounds.
Comment:



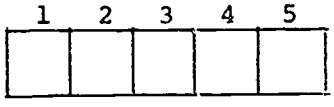
8. You can't make children get together if they're too different - they just won't mix.
Comment:



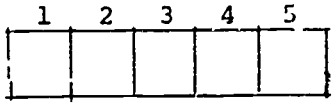
9. It is well worthwhile including intellectually handicapped children who are <u>younger</u> than the usual intermediate age level in this project.
Comment:



10. It is well worthwhile including IH children who are <u>older</u> than the usual intermediate age level.
Comment.



11. All things considered, I think an integration scheme like this is a good idea.
Comment:



12. Prior to this year, how much contact have you had with intellectually handicapped children?
Comment:

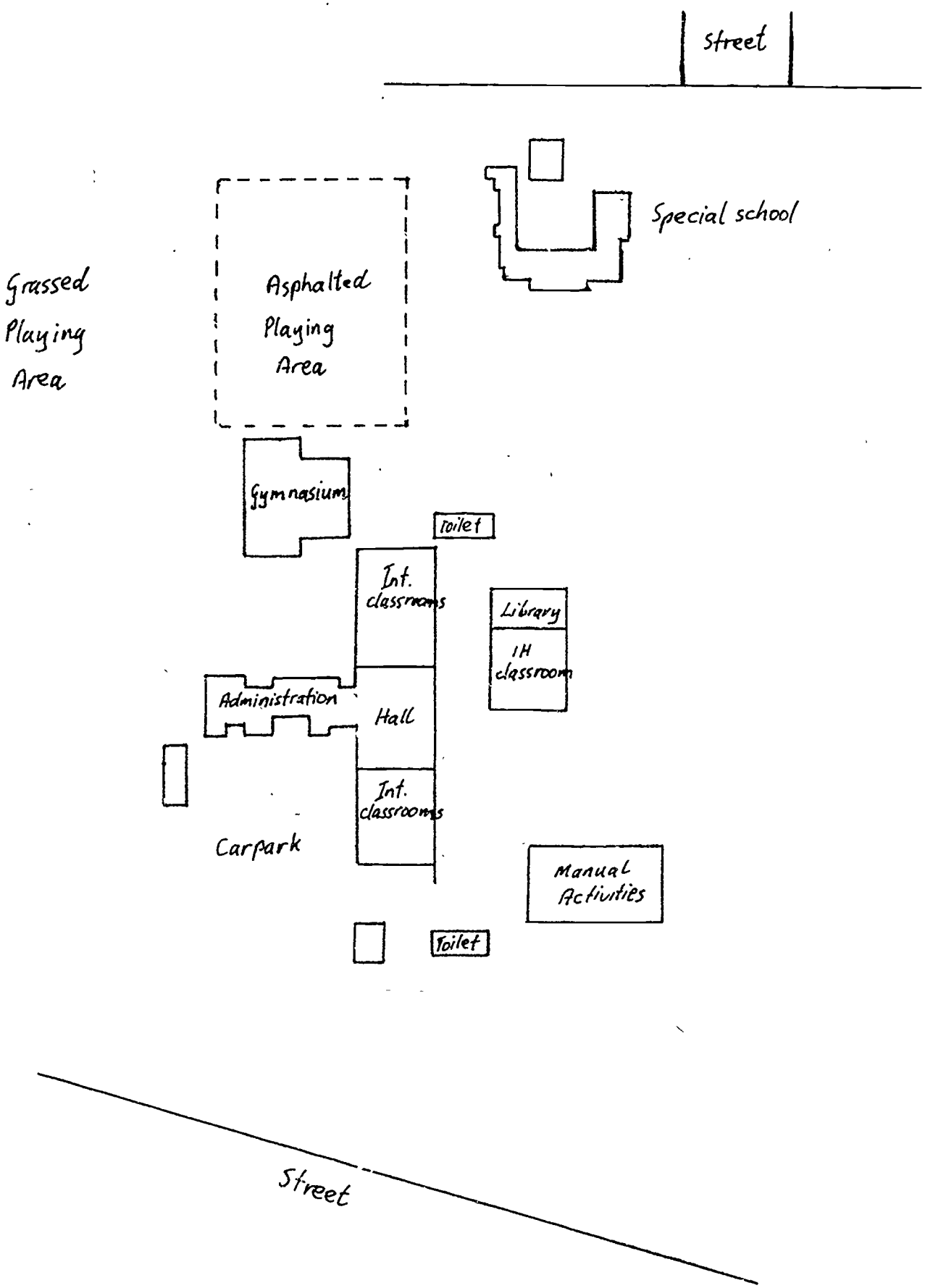
A great deal
Some
Very little
None

Finally, when you have completed the questionnaire, <u>please return it in the enclosed stamped, addressed, envelope as soon as possible</u>.

Thank you for your cooperation.

APPENDIX B

PLAN OF CAMPUS



APPENDIX C

CATEGORY SYSTEM FOR PLAYGROUND BEHAVIOURS

Zone

Home room zone	:	in classroom or in immediately adjacent area.
Library	:	located adjacent to classroom.
Middle zone	:	in areas within an approximate radius of 30 metres of classroom.
Outer zone	:	in areas beyond an approximate radius of 30 metres of classroom.

Activity

Formal/informal games	:	games which require cooperative action, ranging from those with formal sets of rules (e.g., cricket) to those with loose rules (e.g., "statues")
Unstructured play	:	activities involving some measure of cooperative action, but without an apparent "game" structure (e.g., chasing, hiding, play fighting)
Communication	:	verbal and non-verbal communication is the focus of the interaction but is not an integral part of a game (e.g., talking together, being read to, greeting); may be reciprocal or non-reciprocal.
Passive participation	:	in close physical proximity to, but not actively participating with, a group or another person (i.e. "tagging along").
Onlooker/ Non-interactive	:	observing on-going activity of others, no interaction with others (e.g., watching, wandering, gazing into space).

Social Unit

Solo

Pair

Group (non-interactive)	:	a group of three or more individuals in which the IH child is an onlooker or is non-interactive.
Group (interactive)	:	a group of three or more individuals in which the IH child is an active participant.

Composition of Social Units

Other IH children only

Teacher	:	teacher alone or with other IH children in the group.
Intermediate children	:	Intermediate child(ren) alone or together with other IH children in the group.

Contacts' Responses

Positive	:	accepting, welcoming response.
Negative	:	rejecting, punishing, ridiculing, teasing response.
Neutral	:	neither clearly positive or negative, including acceptance without overt encouragement; ambiguous response.

APPENDIX D

THE SPECIAL SCHOOL PRINCIPAL'S VIEW OF THE INTEGRATION PROJECT

FACILITATING INTEGRATION IN THE SCHOOL SYSTEM.

A paper presented at the New Zealand Institute of Mental Retardation Conference, May, 1981 on The Educational and Vocational Opportunity for Mentally Retarded Children and Adults.

Jill Mitchell,
Hamilton Teachers College.

Facilitating Integration in the School System.

Recently a young male Downs Syndrome adult, in a group ahead of me, climbed a narrow steep track to a Kauri dam in the Coromandel; I see sheltered workshop employees selecting their library books at the Public Library; Special School pupils attend holiday programmes run by our local Council; sports' clubs are accepting people with special needs. In New Zealand today there is a trend toward including such people in many aspects of life - allowing them to have what the rest of us have always regarded as normal experiences.

This trend is apparent, too, in our education system. Not only are we reviewing the educational needs of handicapped people and how these may best be met, but also, where they should receive their education. With thinking in this area moving rapidly from exclusion to inclusion, what better place to build a new school for intellectually handicapped children than on the grounds of a regular school.

A spirit of optimism was obvious in 1977 when the South Auckland Education Board decided to take the bold step and open a new school, Hamilton North School for intellectually handicapped children, on the same campus as the newly established St Andrews Intermediate. At the same time it was viewed with excitement and some feelings of trepidation. These were expressed in the early stages by the teachers and parents of children in both schools. For the intermediate children, and the majority of their parents and teachers, the contact with intellectually handicapped children was to be a new experience. A large group of people was faced with coming to grips with understanding something about the characteristics of students with special needs, ranging in age from 5-18 years, and learning to live with these characteristics for at least part of the day. By sharing the same grounds, it was not envisaged that the two schools would merely sit alongside each other but that there would be interaction between the two and the sharing of some facilities.

Prior to the school's opening, the excitement of the parents of the intellectually handicapped children was tempered by some concern that their children may have difficulties in being accepted by other pupils, and in coping with bullying or teasing, adjusting to the new environment, or that their presence may be detrimental to brothers or sisters at the Intermediate school. During my period of three and a half years as Principal of Hamilton North School no major problems emerged. With now having been away from the school for one year, I feel that I am in a good position to stand back and reflect on the situation and to suggest ways of facilitating integration.

Integration Study by Waikato University.

As a teacher involved in such a project, it is difficult to be completely objective about what happened. A proposal from the University of Waikato, supported by

the South Auckland Education Board and the Society for the Intellectually Handicapped, to monitor and evaluate aspects during the first year offered this objectivity. The study examined, first, the attitudes of those involved in the project and, secondly, the nature of the playground interaction of the intellectually handicapped children. (Mitchell, 1980).

Two questionnaires, one in the first week of the year and one towards the end of the year, were given to the Intermediate pupils and their teachers and to the parents of both schools to ascertain their attitudes to the school. Where possible, identical or similar questions were asked for each group so that the opinions of all those involved could be compared. Questions were asked regarding attitudes towards integrating intellectually handicapped children with non-handicapped children, the effects on both groups of children, and the effects of including intellectually handicapped children not within the usual age range of intermediate children. In addition, there were specific questions for each group.

People are ready to accept differences.

Had I been asked to predict the feelings of the adults and children answering the first questionnaire I would have badly underestimated how favourably inclined they would be to accepting children with special needs. McMaster, writing in England in 1973, stated that:

> ...few parents of normal children take kindly to the idea of real integration and most are antagonistic towards any interaction or contact with the mentally handicapped...
>
> - McMaster, 1973. p.114.

This was not the case with the pupils, parents and teachers surveyed. There was acceptance by the vast majority of them of something very different. How easy it is to underestimate our society's willingness to accept people with special needs. How easy it is to underestimate the openness and wisdom of many intermediate age children. One Form I girl, for example, commented:

> "Segregation is never good for the intellectually handicapped as they don't learn the social skills of living with other people."

This acceptance of the need to provide opportunities for the intellectually handicapped and non-handicapped children to mix with each other was maintained in the second questionnaire. A variety of reasons were put forward:

Intermediate children:

> "Just 'cause we're normal and they're not who says it's bad or horrible to mix with them. ...it helps them when they leave school. It might make them feel they aren't all that different."

Intermediate parents:

> "Only through this can any child hope to accept other children who are handicapped. These children are all part of the

community and early integration will lead to a greater acceptance on both sides in later life."

Visitors to the school echoed these views and were frequently envious of the opportunities available to both sets of children. A mother accompanying a visiting Intermediate's sports team, for example, expressed surprise at the obvious acceptance of Hamilton North children and wished her daughter's school had the same arrangment.

Benefits in social, motor, and language areas.

There are many advantages for the intellectually handicapped child. Ninety five per cent of the parents of handicapped children felt that their children would benefit or had benefitted considerably from contact with children in a regular school.

"My child now has more confidence to speak to others, can now go to shops without a note, less shy and more accepting of his handicap."

"My child has grown up a lot; it's the best thing that's happened to him, talks a lot better, confidence in mixing in crowds, an improved ability to cope in general."

Not only were social and language skills commented on, but attention was drawn to improved motor skills. One intermediate teacher, for example, noted an improvement in the intellectually handicapped children's independence, motor skills and sharing in games. A Form II Intermediate child stated:

"They have learnt how to play our types of games and how to mix in with us."

These were all areas in which teachers working with the children had noticed marked improvements. From very early on it was fascinating watching the pupils being taught complicated games requiring an understanding of procedures, of social and motor skills, and being accepted into games. Once the rules were learnt no one was allowed to break them without much discussion ensuing.

Moving through the system.

Hamilton North pupils are exposed mainly to the Intermediate School system. It may be preferable to have them moving through the educational system from kindergarten, primary school, intermediate school and high school like any other child. When the questionnaire respondents were asked whether it was worthwhile including older handicapped children in the Intermediate school setting, the response was less enthusiastic than in other questions. Intermediate parents thought less of the idea than did their children (in the first questionnaire 54.1 per-cent vs. 73.3 per-cent). On the second occasion, however, the two groups had moved closer together (56.3 per-cent vs. 65.9 per-cent).

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Intermediate children became less sympathetic to the notion of older children in the school. Most of the comments for not having older children centred on concerns about their aggressiveness and supposed sexuality. (Fears that had been expressed to the Intermediate Principal prior to the school opening). It is worth noting that at the time the second questionnaire was given there had been recent episodes of aggressive, unreasonable behaviour from a group of senior boys, but that we had no knowledge of any unacceptable sexual behaviour.

Less concern was expressed about the younger children being present. Any that was expressed centred more on the well-being of the younger children than on their effect on Intermediate pupils.

Sheltered environment vs. shared school grounds.

When the parents were asked if they thought the handicapped children would be happier in a more sheltered environment the majority of both sets of parents rejected this notion on both occasions. On the first occasion, only 23.8 per-cent of the parents of intellectually handicapped children agreed, with some reservations, that this was true but by the end of the year there were none who felt this way. One parent commented, "Our son hasn't been happier, he is thriving" while another said, "He hates to miss attending." One intermediate parent said in the second questionnaire:

> "We have no direct knowledge concerning any unhappiness. Certainly from what our son is continually reporting, these children are happy where they are."

Most intermediate parents disagreed that their children were a bit scared of being among intellectually handicapped children. The children were slightly less emphatic but, nevertheless, in the majority of cases rejected the notion. Those who admitted to being scared focussed again on rough and boisterous behaviour. Many parents and children commented on changes in attitudes throughout the year in the direction of more acceptance:

> "Initially my daughter was afraid but has overcome this almost completely."
> "Not any longer, although he used to be before attending St. Andrews."

Everyone grows.

A significant change was noted between the two questionnaires when the intermediate children were asked if they were sure how to talk to intellectually handicapped children. On the first occasion, 45.5 per-cent said they were not sure or had reservations, but by the second occasion this had dropped significantly to 26.6 per-cent. Comments were made on the necessity to adjust language, to speak clearly, and on difficulties encountered with some of the children's expressive language. Obviously, over the year, the intermediate children became much more skilled in this interaction.

The final question put to everyone was whether they considered such a scheme a good idea. According to the researcher (Mitchell, 1980), this was intended to gauge the level of support for the project, after thinking about several of the issues involved. A very high degree of support was forthcoming. Two parents typified this when they said:

> "I was not happy about the scheme at first but can see now that it has advantages both for the handicapped and the non-handicapped." (Parent of an intellectually handicapped child).

> "There should be more schools like St Andrews throughout New Zealand. Only good could come of a scheme like this." (Parent of an intermediate child).

Advantages and disadvantages

There are both advantages and disadvantages in placing a school for intellectually handicapped children in the same grounds as an intermediate. One disadvantage is the rapid turnover of pupils in the latter school. Every two years approximately half the pupils move on to College. Every year, pupils' friends leave and every year adjustments have to be made by each group. In the long term, however, this could be an advantage. Changing groups of adolescents are learning more about interacting with others who are different from themselves. They are learning greater acceptance through regular real-life situations.

These real-life situations were not confined to the playground. Every week the whole school attended two assemblies in St Andrews, one of these being a community singing assembly. Every year pupils went to cooking and woodwork classes in St Andrews. These classes catered each week for eight pupils in separate classes and eight in classes working with intermediate pupils. As there were changes in those participating from year to year, over twenty of the pupils had been in both woodwork and cooking classes.

Two pupils attended a weekly art and craft class for a year, and from time to time there was participation in physical education and sports activities. Theatre and music groups were visited by both schools. Teachers from the Special School have taken a Yoga Club, French and Drama in the Intermediate - drama successfully drawing pupils from both schools. And so the list goes on....

As the children in the intermediate covered such a narrow age range, opportunities to bring in and to visit other schools in the community were welcomed. As part of a General Studies programme, for example, senior students from one city college visited one afternoon a week over four week periods throughout the year. Senior students from another high school coached groups of students in soccer skills. For most of these students it was their first opportunity to establish interactive relationships with intellectually handicapped people of their own age. In many cases teachers found that they had

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to be taught interactive skills. There was frequently a tendency on the student's part to reinforce socially unacceptable behaviour.

What of the Future?

The U.S.A. Public Law 94-142 emphasizes that children with special needs should be educated in the "least restrictive environment" for each individual. When two schools share the same campus an opportunity to provide such an environment occurs. The children are, in effect, part of the regular school system as well as the special education system. They mix with children in a regular school, have models of behaviour and "teachers" aplenty, plus the use of facilities such as a gymnasium, a well equipped library and multi-purpose room that most smaller special schools would have difficulty in providing. Yet, within the special education facility, they are able to participate in programmes tailored to meet their individual needs.

The potential for integration has, however, only been tapped - not yet fully exploited. Speaking at the First National Conference for exceptional Children in May, 1980, Professor Winterbourn stated that the success of any innovation depends to a large extent on the overall atmosphere or ethos of the school. This overall atmosphere or ethos of a school is a matter of significance when considering the success, or otherwise, of integrated or segregated patterns. We should ensure in any regular school where integration is being attempted, that not only the teachers but also the ancillary staff and perhaps most importantly that the principals themselves, understand how to cater for intellectually handicapped children in a caring realistic way. Most of these people have had no experience or formal training with such children. Not only do they need well organized inservice courses to learn about the educational requirements of such children but, they also need someone with whom they can discuss their attitudes, feelings and, in some cases, fears. As well as support of a more general nature they need easy access to back-up resource personnel for assistance in programming, management techniques and support of a more general nature.

The principal and/or teacher primarily responsible for the child with special needs can provide much of this support, however, in the majority of special education facilities both have full-time teaching roles. The integration of exceptional children, whether it be partial or full-time is not like Newton's Cradle. Once set in motion it does not just continue without a hitch. It requires preparation, regular consultation, and the opportunities to smooth out problems as they arise. There must be some release from full-time teaching if the opportunities for integrating children into a regular setting are to be grasped and developed fully.

Integration of exceptional children may be viewed by some as a way of lightening the load of the special education teacher. Not so, for extra responsibilities are assumed. It is essential that the teacher is clear in his or her own mind about what they expect children to get from a programme in a regular school, that they can convey this along with very specific information about the child to the regular classroom teacher, and that they can analyse and develop some of the skills necessary to ensure success in an integrated programme. Many regular classroom teachers have found, for example, that "special education children" have difficulty in working independently. Glazzard (1981) offers a range of activities for teaching students to work without teacher supervision.

As there are different responsibilities in schools where integration is encouraged, positions, when advertised, should state quite clearly the nature of both schools and the teachers' responsibilities toward furthering integration. Rather than feeling uncomfortable and possibly even resentful in such a situation teachers should choose to work in it.

Finally, children cannot be taught to function in a community isolated from it. Some form of integration is essential. We, as parents and teachers, must be prepared to take well calculated risks, to experience frustrations as well as success, if we believe that in the long term the children we are working with will truly benefit. In doing so, we must watch how we, as adults, go about this. We use labels to segregate people. Labels emphasise differences than similarities. Children with special needs in the school system are more like other children than they are different from them. Two comments made by intermediate pupils, who were more aware of the similarities than the differences, serve as reminders.

> "Tony lives near us. I didn't know he was handicapped until I saw him at this school."
>
> "What's wrong with Susan? I can't understand why she's called handicapped - I just can't."

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