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ABSTRACT

The first phase of a study of the effectiveness of mainstreaming of children with disabilities in the schools of New South Wales, Australia, is reported. This portion of the study involved intensive observations of small numbers of children (N=43) in all disability groups (mental, physical, sensory, emotional/behavioral, and language disabilities) in metropolitan and county elementary schools. The objective of this phase was to establish and try methodological procedures. The overall study's objectives are to provide basic data, by case study, about the quality of the educational and social experiences of these populations and to determine factors relevant to child, classroom, and school associated with successful academic, social, and physical integration. Child factors examined include demographic characteristics, disability type, scholastic achievement, personal/social adjustment, cognitive level, extracurricular activities, and parental attitudes to and degree of support for integration. Classroom factors include teacher's instructional style, instructional appropriateness, time management, attitudes toward integration, average time on task for the class, and classroom climate. School factors include use of support services, school ethos, type of school organization, and staff attitudes toward integration. Conclusions of this phase and several case study reports are included. (MSE)

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**THE INTEGRATION OF CHILDREN WITH DISABILITIES
INTO REGULAR CLASSES (MAINSTREAMING)**

- A NATURALISTIC STUDY -

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CONTENTS

	Page
INTRODUCTION	1
METHODOLOGY	4
ANALYSIS OF DATA	10
RESULTS	12
CHILDREN WITH SENSORY DISABILITIES	17
CHILDREN WITH PHYSICAL DISABILITIES	22
CHILDREN WITH LANGUAGE IMPAIRMENT	28
CHILDREN WITH INTELLECTUAL DISABILITIES	31
CHILDREN WITH BEHAVIOURAL & EMOTIONAL DISABILITIES	36
OTHER GENERAL RESULTS OF THE STUDY	42
DISCUSSION & PROPOSALS FOR STAGE 2	47
REFERENCES	52
APPENDIX - EXEMPLARY CASE STUDIES	54

PREFACE

In late 1986, the N.S.W. Department of Education accepted a proposal by Macquarie University Special Education Centre to implement an intensive, naturalistic study of children in N.S.W. who have been enrolled under the "Enrolment of Children with Disabilities" policy. Such a study would, it was hoped, provide the Department with information which would help guide the future implementation of this policy.

Two interesting features of this study should be noted:

1. its collaborative nature - involving researchers from Macquarie University, Mitchell CAE, Newcastle CAE and Wollongong University; and
2. its multi-faceted funding involving a major grant from the N.S.W. Department of Education, significant grants from N.S.W. Crippled Childrens Society, The Spastic Centre of N.S.W., and the Down Program. While Macquarie University has provided the seeding finance in the form of funding the coordinating researchers, all other Universities and CAE's have provided additional funding to meet recurrent expenses.

INTRODUCTION

Now that there appears to be little dispute regarding the philosophic principles underlying the concept of integrating children with disabilities into regular schools, the critical issue becomes the most effective implementation of the policy. In Australia, as in many other countries, a policy of integrating students with disabilities has been formally adopted (Commonwealth Schools Commission, 1984). The most recent integration document from the N.S.W. Department of Education (Winder, 1988) affirms that it "has been moving and will continue to move from the provision of predominantly segregated educational settings to the provision of services in the regular neighbourhood school for students with disabilities. This is being achieved both by

1. the provision of services to support students with disabilities in the regular classroom (mainstreaming) and
2. the provision of support classes in regular schools where students with disabilities can receive appropriate educational support while experiencing the daily activities of their local community group."

This paper is concerned only with the **first** of these approaches to integration.

While a number of large-scale attitudinal studies, both locally and overseas (Center, Ward, Parmenter & Nash, 1985; Center & Ward, 1987; Harvey, 1985; Thomas, 1985), confirm that the concept of mainstreaming is strongly upheld by school personnel, they also underscore the reservations expressed about the implementation of the policy. For example, a recent factor analysis on attitudes of principals and teachers to mainstreaming (Ward & Center, 1987) suggests that underlying anxieties are associated with those children whose mainstreaming requires extra instructional skills or extra time involvement on the part of teachers. Thus, concern is being expressed about the placement in regular classes of

1. children with intellectual, behavioural or multiple disabilities (see also Westwood, 1982) where support services are considered either inadequate or inappropriate to supplement teachers' skills and

- 2
2. children with physical disabilities for whom mobility assistance is not provided when access is considered unsuitable.

There is no doubt that quantitative studies of the type reported above are essential to highlight the current status of mainstreaming from the perception of school personnel and to pinpoint implementation difficulties which will require further investigation. However, they cannot, on their own, examine the interplay of factors which are associated with effective integration and which can assist educational administrators to implement policy most appropriately. For example, they cannot address the individual elements of successful mainstreaming situations which involve the interaction of the children and their families with the quality of the learning environment and which can be elicited more effectively by case study methodology. It is argued here that the sequence of quantitative survey research, followed by more detailed ethnographic observations to test hypotheses generated by that research, provides optimum assistance to policy makers by clearly identifying the complex factors involved in successful mainstreaming.

Sadler (1985), in *Educational Evaluation and Policy Analysis*, has also stressed the fact that case studies and surveys are not really genuine evaluation alternatives, but, in fact, serve different evaluative functions. While survey methodology is most appropriate to identify the overall state of pupils, teachers, administrators and schools, it is the case study method which will provide penetrating critical insights into the logical structure of a policy and the manner in which the policy finds expression in the field. Thus, in order to identify factors relating to child, classroom and school which produce the most successful mainstreaming situations, the multiple case study has been adopted as the most relevant methodological instrument for the purpose of this investigation.

AIMS

The aims of this study are as follows:-

1. to provide basic data, via the case study method, about the quality of the educational and social experiences of children with all types of disabilities who are currently integrated and maintained in the regular primary school system.

2. to determine the factors relevant to child, classroom and school which are associated with successful academic, social and physical integration. The specific factors to be considered are:-

a) **child factors:** demographic characteristics, type of disability, scholastic achievement, personal/social adjustment, cognitive level, out-of-school activities, parental attitudes to and degree of support for integration.

b) **classroom factors:** total learning environment including teachers' instructional style, instructional appropriateness, time-management, attitudes towards integration, average time on task for class and classroom climate.

c) **school factors:** use of support services, school ethos, type of school organisation, staff attitudes to integration.

It is anticipated that the research study, which consists of two stages, will take approximately two years for completion.

Stage 1 has involved intensive observations of relatively small numbers of children across all disability groups in metropolitan and country primary schools to establish and trial procedures. This stage has been essentially a model building exercise to provide a basis for Stage 2 and the results are reported in this paper.

Stage 2 will apply those procedures which have demonstrated their effectiveness in Stage 1 to a larger group of children. It is possible that not all disabilities will require further in-depth investigation in this second stage and that some disabled children at secondary level will need to be included. A sample of support classes for children with intellectual and physical disabilities will also be included for which new methodology will be devised. It is anticipated that the results of this second stage study will be published early in 1989.

It is emphasised that the observational procedures which will be used in both stages require a detailed case-study approach.

METHODOLOGY

1. Sampling Procedures.

a) The Children

The children included in the sample for Stage 1 were selected to represent all disability groups currently enrolled in mainstream classes under the "Enrolment of Children with Disabilities" policy. In addition children now in regular classes who had spent some time in special language and adjustment classes were also considered eligible for the study. It was decided to restrict the sample to infants and primary school children since most mainstreaming is occurring at this level and the methodology for primary classroom observations has been most refined (Larrivee, 1985; Medley, 1977). It had been decided by a joint meeting of researchers working in the five metropolitan and country regions represented in the study (Metropolitan North, Metropolitan West, Hunter, Western and Illawarra), that two children from each of the categories of physical, intellectual and sensory disabilities, and one child from each of the categories of language and emotional disability would be included. Additional children with cerebral palsy and Down Syndrome would also be observed to meet the information needs of the other funding bodies.

The children finally included in the study were selected randomly from lists provided by central and regional integration officers and personnel from the Spastic Centre and Down Syndrome program. When approval had been obtained from all relevant regional directors and Catholic Education offices, only those children were selected whose principal, classroom teacher and parent gave permission for the two-week observation period in the classroom and for interview sessions. Eight children needed to be deleted from the sample using this procedure and, where possible, were replaced by others from the relevant disability category selected randomly once again.

The final effective sample contained 43 children from 41 schools in the previously designated regions from the following grades:

Grade 1	- 6 children	
Grade 2	- 13 children	19 at infants level
Grade 3	- 7 children	
Grade 4	- 4 children	
Grade 5	- 7 children	
Grade 6	- 6 children	24 at primary level

The disability categories were represented in the following manner:

12 children with intellectual disabilities including 5 children with Down Syndrome

13 children with physical disabilities including 7 children with cerebral palsy and 3 children with a combination of physical and intellectual disability

8 children with sensory disability

5 children with emotional/behavioural disabilities

5 children with language disorders

2. Other Descriptive Characteristics of the sample

a) Teachers

The teachers in the sample varied widely in terms of both their age and their years of teaching experience. Approximately 40% of the sample had received some form of special education training, which was generally a course or unit within their pre-service and/or post service training. Some 16% of teachers had also attended at least one inservice course in special education while one teacher only had completed a post graduate course in special education. Those with some form of special training were distributed evenly among all the disability groups with the exception of children with behavioural disorders. In addition, 30% of the teachers with integrated children reported that they had had previous experience in mainstreaming a child with disabilities. Almost all teachers (95%) reported that they had on average about three children in their class, apart from the target child, who required additional help or attention because of learning or behavioural difficulties. However, only in 30% of cases was extra assistance provided for these children.

b) Support Services

The most common form of support provided to a teacher with a mainstreamed child was a teacher's aide whose assistance varied from one hour per fortnight to a maximum of about 15-16 hours per week. Almost 50% of teachers in the sample had access to a teachers aide for their mainstreamed disabled children. However, specific help for integration from more traditional support services (ie. resource teachers and school counsellors) was received by only 25-30% of teachers. Interestingly, all but one teacher with a sensorily disabled child in their class were

receiving support from an itinerant teacher of the sensorily impaired, but only 20% with a behaviourally or emotionally disturbed child had the services of an itinerant teacher of the behaviour disordered. Some 16% of teachers reported that they were using parents or other volunteers in their classroom, usually when a physically disabled child was integrated into the class. More highly specialised forms of support (from an integration teacher or special education consultant) were only available to a very small percentage of teachers (16%). In addition approximately one third of the teachers had received additional physical resources such as the provision of ramps, to aid the integration of children with physical disabilities.

2. Observational Procedures

Six observers, representing two metropolitan and three country regions, spent approximately two weeks in each school, collecting a variety of qualitative and quantitative data on each child, classroom and school. The three main sources of data included:

- a) Detailed qualitative observations of the child in both the classroom and the playground
- b) Interviews with all relevant school personnel, parents, child and selected peers.
- c) Quantitative measures such as observational schedules, self-report interviews and questionnaires to assess the total learning environment of the child.

Prior to the two-week observation period in each school, all country and metropolitan researchers spent one week together to establish reliability on the observational schedules adapted for the study. Reliability figures, using every researcher combination, ranged from 87% to 100% with one low rating of 77% for an analysis of the questioning pattern of teachers. Since this was a pilot study, designed in part to test instrumentation, it was decided that all researchers would use the two main observational schedules, four would use two additional structured observation schedules, while the remaining two would use more detailed, ethnographic observations to ensure that no elements of the learning environment were being overlooked.

3. Instrumentation

a) Child Measures

In order to measure both the scholastic achievement of the target children and academic progress in relation to their peers, their entire class groups were administered normed and criterion-referenced tests in word knowledge, comprehension and maths in both April and November. Wherever possible parallel class groups in which a disabled child was not integrated were also tested in the same way to obtain comparative figures for academic progress over six months. Teachers' ratings of the academic competence of the target children and their classmates were obtained in April, while in November ratings on progress were obtained for the target children only. Parents' opinions of their children's academic achievement were also sought during the parent interview and, where appropriate, results of cognitive testing were also obtained.

The social status of the children in the sample was obtained in years 3 - 6 by using the Perception of Social Closeness Scale (Horne, 1977) where every class member rates every other class member on a five point interval scale of social acceptability. As this was considered too complex for the younger grades a modified sociogram (Moreno, 1934) was presented to infants children in which each child was asked to select up to three class members with whom to sit, play and work. These instruments were also administered in both April and November to determine changes in social acceptability and to validate the instrumentation. Teachers' ratings of the social position of the target child and peer group were also obtained in April, but in November teachers' ratings were restricted to social progress of the integrated child. Parents' opinions of their child's social/emotional progress and descriptions of out-of-school activities were also elicited in the parent interview. In addition, observations of the target children's behaviour in the classroom and interactions with their peers in the playground were carried out during the two-week observation period the researchers spent at each school.

The physical integration of each child, which included physical participation in classroom activities, access to other school areas and participation in general activities conducted by the school, was noted each day throughout the entire observational session.

b) Classroom Measures

Brophy (1985) has stated that, despite the movement towards integration, neither the policy nor the administrative directives have provided much guidance concerning the nature of the instruction that mainstreamed students should receive from their regular class teachers. Thus, the classroom measures chosen for this study included those which researchers (Brophy, 1979; Crisci, 1981; Gage, 1978; Rosenshine, 1979) have indicated to be of maximum relevance for effective mainstreaming. They were based on a synthesis undertaken by Larrivee (1985) of process/product research studies in which she identified 20 teaching behaviours that were consistently correlated with achievement at the primary grade level for lower ability students. As it was theorised on the basis of past studies (Center & Ward 1987; Ward & Center, 1987) that teachers would find most difficulty mainstreaming students whose achievement was significantly below grade level (i.e. children with neurological, intellectual, behavioural and/or multiple difficulties), it was considered pertinent to see whether specific classroom practices were associated with positive academic and/or social outcomes for mainstreamed students.

The classroom practices which were observed in this study could be roughly categorised under three headings (Berliner, 1984).

- i. PRE-INSTRUCTIONAL factors which included teachers' **diagnostic skills, grouping children for instruction, subject time allocation and pacing** of lesson material.
- ii. DURING-INSTRUCTIONAL factors which consisted of **behavioural management techniques, degree of lesson structure, teacher initiated instruction, time management, questioning pattern, classroom climate** and amount of **class engaged time**.
- iii. POST-INSTRUCTIONAL factors which related to **testing** of learnt material and **feedback** about performance given to students.

In addition to the observation of these classroom practices the **attitudes** of classroom teachers in the sample to the integration of children with disabilities were also measured.

The instrumentation used to record all data relevant to teachers consisted of observational schedules, self-report inventories, questionnaires and interviews. Observational schedules included modified versions of the Observer Rating Scale, Questioning Pattern Observation Form, Child/Teacher

Time Management Form and Intervention Strategy Record, all based on instruments originally designed by Larrivee (1985). Modifications were undertaken in order either to reduce the high inference nature of some of the schedules or to adapt them to Australian conditions. Self-report inventories included a modified "Survey of Teachers' Opinions Relative to Mainstreaming Special Needs Children" (Hudson & Clunies-Ross, 1984, adapted from Larrivee & Cooke, 1979) and the Intervention Strategy Inventory, (Larrivee, 1985). Questionnaires and interview schedules were specifically designed for the purposes of this study, to provide information on any instructional variables that were not addressed by the observational schedules as well as to probe more deeply some aspects of classroom practices.

As Stage 1 has been designed as a model-building stage, all observational, self-report, interview and questionnaire data relevant to teachers are being cross-correlated and scaled to determine the most economic use of instruments as well as the most relevant classroom variables to be included in Stage 2 of the study.

c) School Measures

Data from attitudinal studies on mainstreaming (Center et al, 1985; Center & Ward, 1987) indicate that teachers appear to be significantly more tolerant towards mainstreaming if intra-school modifications have been initiated by their principals to accommodate atypical students. Thus it was considered important to obtain an indication of principals' deployment of resources to assist mainstreamed students as well as a measure of the way in which principals listed their role priorities. For the measurement of the latter, a School Priorities Scale was specifically devised and each principal was required to choose his/her most and least preferred option regarding school management aims. For the purposes of this study, only the most preferred options were considered, since in a number of cases, least preferred options simply represented lower priority positive rather than negative choices. The amount of support provided to each teacher for his/her mainstreamed child was observed during the two-week period in the school and was validated during the principal interview. **Appropriateness** of support was rated separately by both teacher and researcher and these scores were then averaged. School ethos, as measured by the attitudes of the principal and other staff members to the mainstreaming of the child with disabilities, was assessed subjectively and also through discussions with principal, classroom teachers, resource staff, school counsellors and parents.

ANALYSIS OF DATA

All academic, social/emotional and physical access measures obtained for the target children, through direct testing, observation schedules and teacher/parent ratings from questionnaires and interviews were recorded separately to establish three discrete indices of integration. The **index of academic integration** for each child consisted of 7 components measuring:

1. teacher's rating of academic status
2. parents' rating of academic status
3. child's academic progress over 6 months in **reading** relative to the class group
4. child's academic progress over 6 months in **maths** relative to the class group
5. appropriateness of class curriculum for child
6. degree of curriculum modification for child
7. child's time on task in basic skills

The **index of social integration** for each child consisted of ten components measuring:

1. teacher's rating of social acceptability (from questionnaire)
2. parents' rating of social acceptability
3. peers' rating of social acceptability on a sociogram
4. change in child's social acceptability over 6 months
5. teacher's ranking of child's social status relative to the class group
6. observed playground interaction
7. teacher's rating of playground interaction
8. observed classroom behaviour
9. teacher's ratings of classroom behaviour
10. out-of-school friends

The index of **physical integration** related to the child's:

1. difficulty with physical access
2. free movement around the classroom
3. general participation in school activities

Cronbach alphas of .63, .86 and .51, respectively, indicated that each scale was conceptually valid and could be examined independently within a case study analysis. A factor analysis performed on the academic and social scales also indicated that only one factor was subsumed by each scale. The three indices of integration were also totalled in order to obtain an overall index of integration. The three discrete indices and the total index of integration were validated, to some extent, by comparison with a separate non-experimental measure labelled the **total validation index** which was the degree of satisfaction expressed for present and continued integration by all personnel concerned with the child's education as well as by the child himself.

The three indices of integration and the total integration index became the dependent variables for each child in the study. The predictor variables included the child's disability, cognitive level, age, grade and region, as well as all measured and observed classroom and school factors. All the predictor variables relating to teachers' classroom strategies and to school measures were cross-correlated and scaled to obtain the most economical and efficient group of independent variables. Multi-factorial anovas and multiple regressions were also undertaken in order to estimate the best linear combination of independent variables for predicting successful mainstreaming.

RESULTS

Although this investigation is essentially a multiple case study, it is possible to detect general trends about the current status of children with disabilities who are integrated in regular classes.

Table 1 **Total Integration Index & Validation Index**
For All Disability Groups

Case No	Type of Disability	Total Integration Index (%)	Total Validation Index (%)
5	Sensory	94.9	100.0
16	Sensory	90.4	100.0
18	Sensory	98.7	100.0
26	Sensory	96.8	100.0
29	Sensory	98.1	100.0
30	Sensory	85.6	100.0
33	Sensory	88.5	90.0
39	Sensory	94.2	100.0
TOTAL	SENSORY (N=8)	93.4	98.8
1	Physical	85.9	95.0
2	Physical	91.0	100.0
3	Physical	91.7	100.0
11	Physical	91.0	97.5
14	Physical	93.6	100.0
15	Physical	87.8	100.0
25	Physical	94.9	100.0
31	Physical	73.1 *	77.5 *
32	Physical	95.5	100.0
40	Physical	94.0	100.0
TOTAL	PHYSICAL (N=10)	89.9	97.0
10	Language	84.0	100.0
19	Language	93.6	100.0
28	Language	78.9 *	85.0 *
35	Language	75.6 *	90.0 *
38	Language	84.0	100.0
TOTAL	LANGUAGE (N=5)	83.2	95.0

Case No	Type of Disability	Total Integration Index (%)	Total Validation Index (%)
4	Intellectual	89.1	100.0
6	Intellectual	71.8 *	85.0 *
7	Intellectual	89.7	100.0
12	Intellectual	76.3 *	85.0 *
13	Intellectual	87.8	97.5
17	Intellectual	81.4 +	67.0 +
21	Intellectual	92.3	100.0
23	Intellectual	78.2 *	60.0 *
24	Intellectual	87.2	95.0
34	Intellectual	59.6 *	90.0 *
41	Intellectual	91.0	95.0
43	Intellectual	80.1 +	70.0 +
TOTAL	INTELLECTUAL (N=12)	82.0	87.1
9	Behav./Emotional	62.8 *	58.0 *
20	Behav./Emotional	91.7	100.0
27	Behav./Emotional	59.6 *	35.0 *
36	Behav./Emotional	75.6 *	77.5 *
37	Behav./Emotional	55.8 *	55.0 *
TOTAL	BEHAVIOURAL (N=5)	69.1	65.1
8	Multiple (P/I)	66.0 *	55.0 *
22	Multiple (P/I)	71.8 *	30.0 *
42	Multiple (P/I)	60.3 *	55.0 *
TOTAL	MULTIPLE (N=3)	66.0	46.7

* denotes less than effective integration

+ denotes marginally effective integration

Table 1 shows the total integration index and the total validation index for each child in the sample. The total integration index (in percentages) is composed of the child's academic, social and physical integration derived from direct testing and all relevant observational schedules. The total validation index (in percentages) is composed of the child's and all relevant personnel's estimate of the suitability of the integrated placement both at the present time and for the following year.

Whenever the validation index is 95 or more, there is no question about the effectiveness of the mainstreaming situation from the child, parent and school's viewpoint. If the validation index is in the range 90 and 95 there are some reservations expressed, but it is essentially a satisfactory placement. Between 80 and 90, it appears that the integrated placement is somewhat problematic and doubts about continued integration are being more generally expressed. Below 80, there is evidence that the child's placement in the mainstream is considered inappropriate by all those involved in the child's educational process.

This validation index lends considerable strength to the experimentally derived integration index. By cross referencing, an integration index over 82% indicates an effectively integrated situation. Using this cut-off point it appears that 27 cases or about 63% of the sample observed are being successfully mainstreamed in terms of academic, social and physical outcomes, while 2 cases can be considered as marginal. A closer inspection suggests that children with sensory disabilities are unequivocally successful, and children with physical disabilities are almost all well integrated. At the other end of the spectrum, children with multiple disabilities seem to be overwhelmingly unsuccessful. Children with language and intellectual disabilities, although effectively integrated overall, show much more variability, indicating that disability per se is unable to account for their success or failure. While children with behavioural difficulties tend to be unsuccessfully integrated, one highly successful case suggests that this disability may be offset by the presence of other factors related to the child, school and classroom.

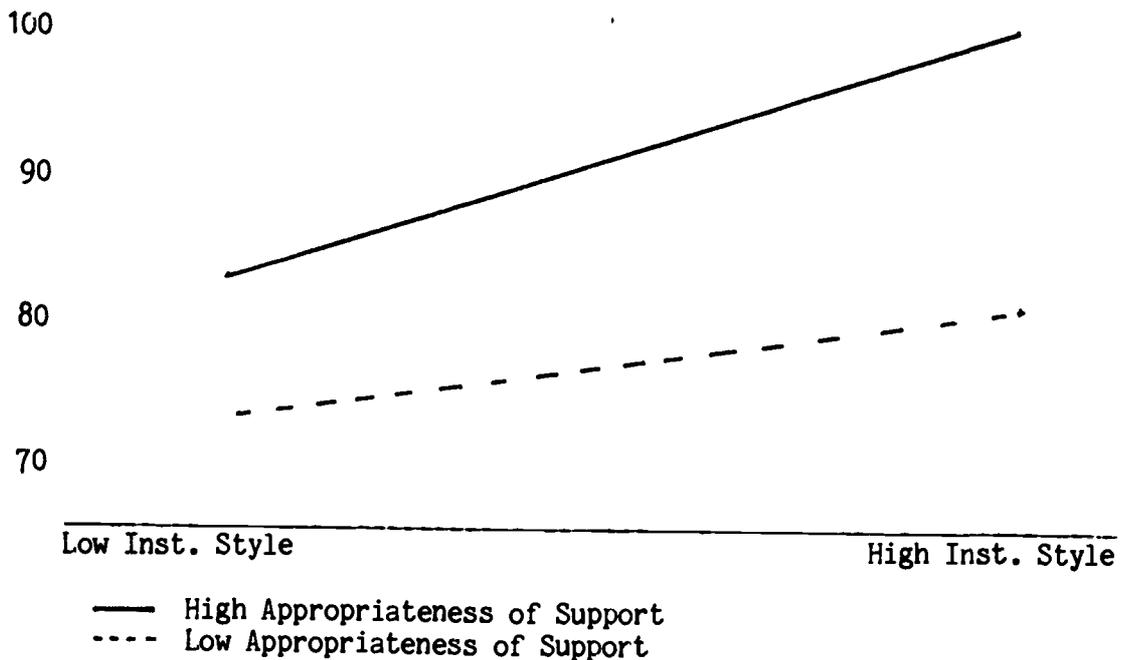
The factor that this study indicates is most closely associated with successful integration is that relating to **appropriateness of support**. A subsidiary but also significant variable for effective mainstreaming concerns **teachers' instructional style**. These two variables in combination account for

32 percent of the variance for the total integration index. **Appropriateness of support** refers both to the quality and the quantity of the resources provided to individual teachers for the mainstreaming of their disabled children. The **instructional style** of teachers that is most highly correlated with effective mainstreaming is one described as highly structured and contains the following components:

1. giving lesson outlines so students know what is expected
2. giving step-by-step sequenced learning directions
3. giving continuous feedback to students by immediately correcting oral work, seatwork and homework
4. having a greater proportion of teacher rather than child-initiated interactions in basic skills
5. monitoring student performance during seatwork rather than doing unrelated tasks such as lesson preparation
6. giving criterion or normed-referenced tests on a regular and frequent basis to monitor progress of learnt material.

Figure 1

Instructional Style X Appropriateness of Support



From Figure 1 it can be clearly seen that even with appropriate support, teachers whose instructional style is highly structured achieve higher integration outcomes for their disabled students, than do teachers without such strategies.

In general terms, therefore, the results suggest that the hypotheses generated from the large-scale attitudinal surveys appear to have been substantiated. When appropriate resource provision is supplied and teachers have mastery over instructional technology then children with disabilities appear to be extremely well integrated. Moreover, even in the absence of structured teacher skills, appropriate support will still result in generally effective integration. However, when neither of these conditions operate, and extra skills and time involvement are needed on the part of teachers, the mainstreaming outcomes become much more problematic. Successful integration will then depend to a large extent on the positive interaction of all three experimental variables, child/parental characteristics, classroom teacher's organisation and attitudes of and total school support for mainstreaming.

The interaction of all these measures can best be explored in depth by using case study methodology so that the factors most closely associated with successful integration within each disability category can be most readily identified.

CHILDREN WITH SENSORY DISABILITIES

A total of eight children with sensory disabilities were included in the study. Of these, three were attending school in the metropolitan area while the remaining five were in country regions. They were equally divided in terms of both **type** of disability (ie visual or hearing impairment) and **degree** of disability (ie, mild, moderate or profound).

Table 2 Integration of Children with Sensory Disabilities

Case No.	Disab'ty	Grade	INDICES OF INTEGRATION			Total Integ	Valid'n Index	Approp. Support	Instruct'l Style
			Academic %	Social %	Physical %				
5	H.I Prof	2	100.0	93.3	88.9	94.9	100.0	100.0	51.0
16	V.I Prof	6	93.3	95.0	77.7	90.4	100.0	100.0	46.0
18	H.I Mild	3	100.0	96.7	100.0	98.7	100.0	100.0	50.0
26	H.I Prof	5	98.3	96.7	94.4	96.8	100.0	100.0	65.0
29	V.I Prof	3	98.3	96.7	100.0	98.1	100.0	100.0	63.0
30	V.I Prof	2	90.0	86.0	77.7	85.6	100.0	50.0	48.0
33	H.I Mod	5	90.0	86.7	88.9	88.5	90.0	81.3	46.0
39	V.I Mod	2	91.7	93.3	100.0	94.2	100.0	87.5	51.0
Means:			95.2	93.0	91.0	93.4	98.8	89.9	52.8

V.I = Visually Impaired H.I = Hearing Impaired
 Prof = Profound Mod = Moderate

An inspection of Table 2 indicates that, as a group, all children with sensory disabilities are effectively mainstreamed, with a mean total integration of 93.4 (cut-off point for successful mainstreaming is over 82). Moreover, all persons concerned with the education of children with sensory disabilities, and the child, see the integration situation as successful. This is indicated by a total validation index of 98.8 (cut-off point for successful mainstreaming is 95). From Table 1 it can also be observed that, as a group, these children tend to be the most successfully mainstreamed of all children studied, with no child designated as inappropriately placed.

While it is tempting to conclude that the success of children with sensory disabilities is totally contingent upon their category of disability, the case study method provides valuable insights into other factors which appear to be strongly associated with their effective mainstreaming. Inspection of Table 2 indicates that the **appropriateness of support** provided to these children was at exemplary levels for all but Cases 30 and 33 and these were the two children whose mainstreaming success appeared somewhat less satisfactory than that of their peers. Further, the **instructional style** of these two children's classroom teacher was observed to be less structured than that of most of the other teachers in this group. While the type of instructional style, per se, is not sufficient to lower the integration index (see Case 16), it may have a deleterious effect on the academic, social and physical integration outcomes of children with sensory disabilities when the resource support is judged to be inappropriate. For example, the combination of less effective resource support and less structured instructional style appeared to have lowered the mainstreaming success of Case 30 who otherwise had a very similar profile to the very successfully integrated Case 16. Moreover, in one case (33), it seems that in addition to these two factors the inherent attributes of the child himself were also instrumental in lowering his integration and validation index. He was the only child in his group with below average ability and lacked the motivation and persistence which characterised the other mainstreamed children with sensory disabilities. Thus, it could be concluded that the interaction of this child's cognitive/affective qualities with the inappropriateness of support provided to a teacher using fewer structured instructional strategies had resulted in a less successful mainstream situation than was observed for other children in this group.

Individual case study examinations thus underscore three issues of essential importance for the effective implementation of mainstreaming policy for children with sensory disabilities:

1. the type of resource support which is most appropriate for the children
2. the teaching strategies which can positively offset the absence of exemplary resource provision
3. the characteristics of children with sensory disabilities who are most effectively integrated.

When the most effective mainstreaming situations were closely examined, it appeared that the resource support rated as most appropriate for **sensorily handicapped students** was an itinerant teacher who either team-taught or withdrew children for intensive individual assistance. The advantages of the former method was that it provided a greater degree of normalisation since the child stayed in his classroom and the itinerant teacher could help other children apart from the target child. In addition in a team-teaching situation constant liaison could also be maintained between classroom teacher and resource support.

For example, one highly structured teacher of an effectively mainstreamed child with **mild-moderate visual impairment** found the team-teaching situation most advantageous since it catered both for the target child and other needy students. On the other hand, in another classroom where a **profoundly hearing impaired** child was also successfully mainstreamed by a highly structured teacher, a withdrawal approach by the itinerant teacher was also considered appropriate. This was in response to the child's specific weakness in speech vocabulary and comprehension and the itinerant teacher always worked in regular consultation with the classroom teacher to reinforce current classroom activities. As there were, however, no team-teaching situations observed even for children with mild hearing impairment no comparative data for this group can be provided. In summary, it appears that the most appropriate form of itinerant support for children with sensory disabilities will be dictated by the individual needs of the disabled child, his peer group and the teacher in whose class he is placed.

While the **appropriateness** of support appears to be the main determinant of successful mainstreaming, the **instructional skills** of the classroom teacher also need to be stressed. From this study it appears that those strategies which were most relevant to effective mainstreaming for students with sensory disabilities were those often described as representing a high degree of structure (a full description is provided in an earlier section). While it was clearly less important for teachers of children with sensory disabilities to register high scores on this variable because appropriateness of support was found to be at a high level, it is instructive to note the high academic, social and validation indices for children with the two most structured teachers (Cases 26 and 29). While these indices were also high for Case 18, this latter child had such a mild degree of hearing impairment that his

itinerant teacher had been withdrawn and he could hardly be regarded as a child with a significant sensory disability. Alternatively, the children with the least successful integration and validation results also had the least structured teachers who may have been unable to compensate for the somewhat inappropriate resource support provided. However, this can only be regarded as a tentative conclusion, since there was no case in the sample where a highly structured teacher was provided with a less than satisfactory support service. The contributory positive influence of instructional style will, nevertheless, become more apparent in case studies of children with other disabilities.

This in-depth case study analysis can also assist in delineating the characteristics of children with sensory disabilities who are most effectively integrated into regular infants and primary classrooms. The most critical features appear to be associated with the child's cognitive/affective characteristics and home background rather than with the child's type or degree of disability, school region or grade level. Consequently, children with average and above average intellectual ability with high need achievement and motivation whose parents supported the school program appeared to be successfully mainstreamed (whenever appropriate support was provided), whether they were hearing or visually impaired or whether their disability was of a profound, moderate or mild nature, whether they attended a country or metropolitan school or whether they were in a high or low school grade. This was illustrated by the only problematic case in the sample (30), where the child was below average in intellectual ability, displayed inappropriate social behaviours, had less than exemplary support and a relatively unstructured teaching program.

In summary, although the sample is clearly too small for generalisation, the case studies suggest that the mainstreaming of children with sensory disabilities, in the absence of other difficulties, appears to present few problems at infants' or primary level since no additional skills or time involvement on the part of teachers are perceived to be needed. This outcome appears to stem largely from the availability of well-organised and appropriate support services at the point of school entry. It no doubt also reflects the excellent advisory procedures which operate for children with sensory disabilities right from the time of diagnosis. At each critical educational level, ie. preschool, infants' school and primary school entry,

the team of visiting teacher, specialist school counsellor and audiologist review the characteristics of the child, the wishes and support of the parent and the availability of appropriate resources so that the best educational placement can be undertaken. This study, however, also underscores the additional importance of a structured classroom environment and the most appropriate form of itinerant teacher operation, to ensure that an optimal integration situation can be achieved for every mainstreamed child with sensory disabilities. Furthermore, whenever a child displays weaknesses in general basic skill areas over and above specific sensory disabilities, a trained in-class resource teacher can also be a valuable support to the classroom teacher.

CHILDREN WITH PHYSICAL DISABILITIES

Ten children with physical disabilities, comprising six from the metropolitan area and four from the country regions were included for observation in this study. Of these children the greater proportion (seven) had physical disabilities which were of neurological origin either because of cerebral palsy or spina bifida with hydrocephalus, while the remaining three suffered from spinal atrophy, rheumatoid arthritis or lumbar sacral agenesis. Cognitive abilities of these children were distributed fairly widely, from one child in the borderline mildly retarded range through to one child with above average intellectual skills.

Table 3 Integration of Children with Physical Disabilities

Case No.	Disab'ty	Grade	INDICES OF INTEGRATION			Total Integ	Valid'n Index	Approp. Support	Instruct'l Style
			Academic %	Social %	Physical %				
1	Neurolog	2	81.7	91.7	83.3	85.9	95.0	75.0	57.0
2	Neurolog	2	90.0	93.3	88.9	91.0	100.0	87.5	56.0
3	Neurolog	5	91.7	96.7	100.0	91.7	100.0	93.8	57.0
11	Neurolog	2	91.7	95.0	83.3	91.0	97.5	100.0	57.0
14	Spin. At.	1	98.3	98.3	77.7	93.6	100.0	100.0	61.0
15	Neurolog	1	93.3	91.7	72.2	87.8	100.0	87.5	41.0
25	Neurolog	6	96.7	98.3	86.1	94.3	100.0	100.0	57.0
31	Neurolog	4	80.0	70.0	66.7	73.1 *	77.5 *	75.0	56.0
32	L.Sac.Ag.	1	100.0	95.0	88.9	95.5	100.0	100.0	51.0
40	Rheu.Arth.	1	91.7	90.0	77.7	84.0	100.0	100.0	51.0
Means:			91.5	92.0	82.5	88.9	97.0	91.9	54.4

Neurolog = Neurological (spina bifida and/or cerebral Palsy)

Spin. At. = Spinal Atrophy

L.Sac.Ag. = Lumbar Sacral Agenesis

Rheu.Arth. = Rheumatoid Arthritis

* denotes less than effective integration

It can be seen from Table 3 that, as a group, children with physical disabilities are well integrated into regular primary classes, despite some expected access difficulties. Only one child's score in this group fell below the criterion established for effective mainstreaming, and this discrepancy will be fully explored during the individual case study analysis. However,

the observations indicated that where learning problems were also associated with the physical disability the factors which contributed to successful integration were different from those observed for children with no concomitant learning problems. Consequently, results for the two groups of children with physical difficulties are discussed separately.

In the mainstreaming of **physically disabled children without associated learning problems**, (ie. those children with spinal or rheumatic disease or those children in the high average range of ability whose impairment is of neurological origin) no additional skills on the part of the classroom teacher are needed for effective integration. However, if back-up support at the point of school entry is not provided by departmental officers (ie. the provision of ramps, aides-special for mobility assistance and/or toileting needs, advisory or consultant therapy services) there will be a need for extra time involvement on the part of school staff. Consequently, under these conditions, the effectiveness of the integration situation will vary directly with the good-will of the teacher concerned, the attitude of the principal and his staff, the degree of adherence to union policy, and the personal characteristics of the child and his parents. These are not the variables which are associated with the effective education of non-disabled children. They should not be the determinants of a physically handicapped child's inclusion and maintenance in the mainstream. If a commitment to mainstreaming exists as part of educational policy, then suitable access and child handling procedures must be available for the school and its staff from the inception of the integration process.

An inspection of Table 3 also reveals the high academic and social integration indices of the three children in the sample who had physical disabilities that were not of neurological origin (Cases 14, 32, 40). This is not surprising since neither learning nor behavioural difficulties were a concomitant of their condition. However, the issue of appropriate physical integration does merit some attention. In the most effective situation in a country school, (Case 32), the principal, who knew the child and family, had applied well ahead of enrolment for the necessary ramps and personnel to assist with the incoming child's mobility and toileting. The Integration Grant provided all necessary equipment and also paid for an aide-special three hours per day. As the child's mother was already involved in the school as a volunteer helper, the principal appointed her to the newly allocated position. In accordance

with integration policy, this teacher's aide assisted the child when necessary for toileting, but spent the rest of her time working with other children in the class at the teacher's discretion. In this way not only were no additional time demands placed on the teacher, but there was the unexpected bonus of assistance for other needy students. In a contrasting situation, a principal's requests for ramps and an aide-special were not met at the point of enrolment. Despite the parents' entreaties to build ramps themselves and volunteer as daily aides, the principal's views were that the provision of resources remained the responsibility of the Department. Consequently, the enrolment of the child was delayed by six months, a situation which caused unnecessary tension, resentment and sorrow among all those involved in the integration of the child. Although the child's subsequent progress has been excellent, neither principal nor parents should be placed in such an invidious situation which could easily jeopardise the future integration success of the disabled child. It is hoped that such problems at the point of enrolment of physically disabled students will now be reduced as a result of recent developments including:

1. the appointment in mid 1986 of Regional Integration Officers with a responsibility for ensuring appropriate resources are available to support a child's enrolment, and
2. the provision at the end of 1987 of specially designated funds for physical alterations to schools so that they do not have to compete for a share of the total capital budget available for schools.

In the mainstreaming of children with **physical disabilities where there is also evidence of associated learning problems** (eg. children with disabilities of neurological origin who are not in the high average range of intellectual ability) both additional skills and additional time involvement are needed on the part of the teacher. Thus these children not only require appropriate mobility support, but may need extra assistance in the classroom to keep them both motivated and on-task. The interaction of a neurological disability, poor upper limb function and average to below average ability makes success in basic skills areas a harder goal for the cerebral palsied or spina bifida child than for the average non-disabled child (Center & Ward, 1984). Without extra resource support, such children's engaged time in reading and maths, in particular, tends to be below that of their regular peers, and the gap appears to widen as children progress from the less demanding instructional

environment of the infants' school to the more academically oriented upper primary grades.

These conditions were particularly well illustrated in Cases 1 and 31. Both these children suffered from cerebral palsy and their level of ability was in the low average and average range, respectively. In the first case, the target child spent a lot of time off-task compared with her peers and was extremely demanding of her teacher's time in all basic skill areas. Despite resource help for maths in a withdrawal situation, her greatest integration needs were not being addressed. A more effective support could have been a resource teacher, skilled in special education, who observed the child in the classroom and provided her teacher with strategies to extend her on-task behaviour and independence in the classroom. This particular class teacher already used a number of structured teaching strategies and could easily have implemented an in-class program had she been given appropriate direction. However, the child was still regarded as successful within the sheltered environment of the infants' school, although some doubts were being expressed about next year's performance in primary school. A very similar situation operated in Case 31 but because the child was older, displayed inappropriate social skills and had less positive parental support, the total integration and validation index revealed a much more problematic mainstreaming placement. In this case, support was needed to increase the child's academic and physical independence in the classroom, and also to provide a more satisfactory mode of social interaction in the playground. Furthermore, if such a resource teacher could have synchronised parents' wishes and school objectives, then there is no doubt that both parents and school staff would have rated the placement as much more effective.

The remaining children with physical disabilities of neurological origin (Cases 2, 3, 15, 25) all exhibited highly effective integration and validation indices. In Cases 3 and 25, this could be totally explained by the cognitive/affective qualities of the children, the high level of appropriate support and the structured instructional style of their respective teachers. Both children were of high average intelligence, extremely determined and were coping well in high primary classes in all syllabus areas except maths where extra assistance could still be considered. The remaining two cases were slightly less determined infants' children with average cognitive scores, whose present success may not be maintained at the more academically oriented

primary school unless the quality of resource help to both child and teacher is improved.

There is another issue needing further investigation which has emerged from observations and discussions held with the parents, teachers and principals of children with physical disabilities. It is the stated policy of the NSW Department of Education that children should attend their local neighbourhood school. In most instances, this policy is congruent with the wishes of children's parents. However, the situation does occur when the nearest neighbourhood school has less suitable access for physically handicapped children than a school some distance from the child's home. Alternatively, the school further from the child's home may already have had ramps installed for another physically handicapped child and/or have established a reputation for greater tolerance to integration of this disability. It is thus an easier and more economical option to place the child in the more receptive and accessible school, even though taxi transport may need to be provided. Consequently, there is a possibility that a certain school in the district becomes designated as an 'appropriate' school for physically handicapped children, negating the policy of mainstreaming and providing yet another tier in the cascade of educational services - special school, special unit, district school, nearest neighbourhood school. As it may not be financially possible to integrate every physically handicapped child at his/her nearest neighbourhood school, guidelines need to be formulated about the feasibility of mainstreaming every child with physical disabilities. It may be that degree of physical disability may necessarily constrain the freedom of choice available to parents of children with physical disabilities.

In summary, although the results of Table 1 indicate that physically disabled children, as a group, are almost as well integrated as children with sensory disabilities, individual case study analysis highlights the type of resource support and the teaching strategies which can most effectively maintain these children in the mainstream. Furthermore, it also underscores the characteristics of those children for whom mainstreaming is currently most effective and those for whom difficulties in an integrated placement can be anticipated.

For those children whose physical disabilities are not associated with learning difficulties, the most effective resource support is the provision of

ramps and aides-special from the point of school entry to avoid any distressing altercations between parents and child on the one hand and school personnel on the other. Once this has been supplied, it is anticipated that the physically disabled child's educational needs will be similar to those of his non-disabled peers. Since this study has shown that appropriate support is the factor most strongly associated with positive integration outcomes, the issue of teachers' instructional style for this group of children is no longer a critical one. However, as research (Larrivee, 1985) has indicated that teachers who are successful with their lower ability students are also more effective with their regular children, it is highly possible that a structured class environment would also benefit the educational and social outcomes of these children.

For children for whom learning difficulties may be a concomitant of their physical disability both mobility assistance and appropriate resource support need to be provided. From the case study analysis, the most effective support for these children appear to be skilled resource personnel who can assist the classroom teacher to increase children's on-task performance and their academic and social independence in classroom and playground. While small group remedial work may also be appropriate as for any child who experiences difficulties in basic skill areas, the specific problems caused by neurological involvement and poor upper limb function need attention in the classroom. In the absence of such assistance it appears that those teachers who favour a structured instructional style have most success with the academic and social integration outcomes of their disabled students.

This study also reveals that children whose physical difficulties have no neurological basis and those cerebral palsied/spina bifida children in the high average range of intellectual ability are currently most effectively integrated. Once a neurological involvement interacts with an average or below average cognitive score, and appropriate resources/instructional strategies are not instituted, then the mainstreaming situation seems to be satisfactory in infants grades but appears to be more hazardous at upper primary levels. In view of the small sample size it is proposed to test these hypotheses by observing more children whose physical disabilities of neurological origin and who are being mainstreamed in primary classes.

CHILDREN WITH LANGUAGE IMPAIRMENT

Six children with language impairment were observed in this study, two from metropolitan regions and one each from the regions of Hunter, Illawarra and Western. Five of the children had been mainstreamed from initial special language class (OL) placement while the remaining child had been integrated from a hearing impaired (OD) unit because there was no special language unit in his area. Apart from one child in third grade, all the other children in this disability category were being mainstreamed in infants' classes.

Table 4 Integration of Children with Language Disabilities

Case No.	Grade	INDICES OF INTEGRATION			Total Integ %	Valid'n Index %	Approp. Support %	Instruct'l Style %
		Academic %	Social %	Physical %				
10	2	93.3	68.3	94.4	84.0	100.0	68.8	49.0
19	3	91.7	91.7	100.0	93.6	100.0	100.0	57.0
28	1	75.0	70.0	100.0	78.9 *	85.0 *	100.0	59.0
35	2	88.3	61.7	77.7	75.6 *	90.0 *	75.0	48.0
38	2	96.7	61.7	100.0	84.0	100.0	100.0	48.0
Means:		89.0	70.7	94.4	83.2	95.0	88.8	52.2

* denotes less than effective integration

An inspection of Table 4 indicates that, as a group, **children with language disabilities** are effectively integrated, although both total integration and validation indices are beginning to approach marginality. Furthermore, there is evidence of greater variability in terms of success within this group of children. This suggests that the category "language disabled" per se appears to be less significant in explaining the total variance in effective integration for these children than for the disabilities already discussed. In-depth case study analysis provides a better understanding of the other factors that may interact to provide an effective mainstream situation for children with language disabilities.

An inspection of Table 4 indicates that only Case 19 appeared to be unequivocally successful with high academic, social and physical integration indices. Of the remaining four cases, two were successful overall but had low social integration quotients and the integration of the other two was

definitely questionable. The successful child was a child with language delay, first diagnosed at preschool, who exhibited no other atypical behaviour. Furthermore, her success could be partially attributed to the appropriate resource support she received and the effective classroom strategies employed by her teacher. Her academic needs were being appropriately met in a small remedial class group jointly coordinated by the class and resource teacher. In this way she was not being stigmatised by being withdrawn in isolation. Her social integration had been enhanced by her teacher's deliberate policy of fostering a cohesive and cooperative classroom environment by seating low achievers next to high ability children. In addition, as the school had a large ethnic population from non English speaking backgrounds, it was possible that her delayed speech did not appear significantly aberrant. Consequently the interaction of a relatively straight forward language disability with the total quality of her learning environment resulted in this child's highly effective mainstream placement.

In sharp contrast to this success were Cases 28 and 35, both marked by low integration and validation indices. In the former case, despite appropriate support, the child was being mainstreamed in a large class group under the control of two teachers, only one of whom was sensitive to his needs. Unlike Case 19, his cognitive level was in the mildly retarded range and his social behaviour was atypical and immature. Furthermore his parents had never accepted the decision to integrate their son, a situation which was exacerbated by the delayed appointment of a teachers' aide. In summary, child and parental attributes interacting with an unfavourable learning environment contributed towards a placement which, for this particular subject was considered unsatisfactory.

In the case of the second child (38) whose integration was not successful, there were other possible explanations. Once again the child had a number of difficulties apart from her main language problem, being only partially toilet-trained and displaying some autistic behaviours. Her teacher, although sensitive and positive, possessed few of the skills found to be effective with slow-learning children and was unable to lessen the child's dependence on the teachers' aide. This dependency necessarily emphasised the child's atypicality and probably lowered her social interaction with her peers. A large number of people were involved with the child, each providing a separate input without any overall coordination by the class teacher, who was not

therefore, able to exercise full responsibility for the child. When too much assistance is provided to both child and teacher then the normality of the mainstreaming process is threatened.

In conclusion, it appears that children with language disabilities are much more effectively integrated if their presenting problem is one of language delay, without the influence of compounding cognitive or affective factors. It seems that the most appropriate placement for children of this type is in a highly structured classroom with a teacher skilled in both academic and social management assisted by a resource teacher working in a small group withdrawal or team-teaching situation. For more complex cases, the availability of consulting staff with a specialised knowledge of social skills training would be a useful additional support to classroom teachers, since such children appear to lack appropriate social interaction strategies required for an effective mainstream situation.

CHILDREN WITH INTELLECTUAL DISABILITIES

Twelve children with intellectual disabilities, comprising five with Down Syndrome, five with mixed aetiology, one with hydrocephalus and one with P.K.U., were included for observation in this study. Seven of the children were from metropolitan schools while the remaining five were being mainstreamed in the three country regions. They were distributed almost equally between infants and primary grades.

Table 5 Integration of Children with Intellectual Disabilities

Case No.	Disab'ty	Grade	INDICES OF INTEGRATION			Total Integ %	Valid'n Index %	Approp. Support %	Instruct'l Style %
			Academic %	Social %	Physical %				
4	Down S.	4	90.0	88.3	88.9	89.1	100.0	75.0	50.0
6	Intell D.	5	58.3	81.7	77.7	71.8 *	85.0 *	50.0	43.0
7	Down S.	3	76.7	96.7	100.0	89.7	100.0	81.3	43.0
12	Down S.	3	63.3	75.0	100.0	76.3 *	85.0 *	50.0	55.0
13	Down S.	2	91.7	83.3	88.9	87.8	97.5	93.8	47.0
17	Intell D.	5	80.0	71.7	100.0	81.4 +	67.0 +	25.0	46.0
21	Hyd'ceph	6	96.7	86.7	94.4	92.3	100.0	93.8	59.0
23	Intell D.	4	78.3	78.3	77.7	78.2 *	60.0 *	50.0	54.0
24	Intell D.	2	81.7	98.3	77.7	87.2	95.0	87.5	52.0
34	P.K.U.	3	66.7	55.0	55.6	59.6 *	90.0 *	75.0	49.0
41	Down S.	2	81.7	95.0	100.0	91.0	95.0	87.5	51.0
43	Intell D.	1	71.7	76.7	100.0	80.1 +	70.0 +	75.0	50.0
Means:			78.1	82.2	88.4	82.0	87.1	70.3	49.9

Down S. = Down Syndrome Intell D. = Intellectual Delay

Hyd'ceph = Hydrocephalus P.K.U. = Phenylketonuria

* denotes less than effective integration

+ denotes marginally effective integration

The results shown in Table 5 indicate that, as a group, children with intellectual difficulties appear to be integrated at a marginally successful level. Thus the effectiveness of their mainstream placement is most comparable with that of children with language disabilities, but markedly less than that of children with sensory and physical disabilities (see Table 1). However, the important feature of the results is not the mean integration index of the group but the variability evident among the individual children.

Fifty percent of the sample could be considered as extremely well integrated, a finding which is not explicable in terms of either degree of disability, grade or school region. Once again, intensive case study analysis will assist in isolating those factors which account for the greatest variance in success for children with intellectual disabilities.

An examination of Table 5 indicates that neither type nor degree of disability differentiated the successfully integrated group (Cases 4, 7, 13, 21, 24 and 41) from those less successfully placed. Furthermore both groups were located in infants/primary grades in exactly the same proportion, which does suggest that, for this sample, effective mainstreaming was not grade or age dependent. What does emerge however, is the greater degree of **appropriate support** which was provided to the children designated as successful. In each of the six cases it was higher (87.7%) than the mean for the total group (70.3%) and for 4/6 cases the figures indicated highly appropriate resource provision. It must be remembered however, that the measure, **appropriateness of support** was contaminated by teacher's instructional skills, so that Case 21 was actually receiving exemplary assistance from her class teacher without any back-up support from a resource teacher. Thus it appears that when teachers possess the instructional strategies for effectively mainstreaming lower ability students, the demands on skilled resource personnel are reduced. However, in view of possible teacher burn-out, a teachers' aide, under the direction of the class teacher, could probably be considered the best resource provision.

In the two remaining successful cases (4 and 7) where appropriate levels of support were lower and teachers did not use highly structured instructional strategies, an additional factor appeared to contribute to mainstreaming success. Both these schools had an extremely strong commitment both to the policy and practice of integration and this was clearly demonstrated by the attitudes and comments of the respective principals and staff members. One interesting observation was, that in the most highly committed school, where the teacher's use of structured strategies was minimal, the academic integration index of the target child was actually low, but the validation index remained extremely high indicating a lower priority for academic outcomes in a very compassionate learning environment. Once again the success of these students reflects the themes that recur throughout the case study analyses. If teachers feel they have the additional skills needed to integrate lower ability children either intrinsically or by the provision of

appropriate resource support, then the success of the mainstreaming situation is most likely to be assured. However, if a de-emphasis of academic skills is part of the ethos of a strongly committed school, integration will still be successful even with less effective support.

By way of contrast the four cases whose total integration scores fell below the accepted criterion for success (Cases 12, 6, 23, and 34) and the two marginal cases (17 and 43) differed from the successful groups essentially in the poorer quality of assistance provided to them, (mean appropriate support = 56%) although they were also mainly in primary grades. While grade level, on its own, does not appear to militate against successful integration for children with intellectual disabilities, it may well do so in the more academically pressured primary classroom in the absence of appropriate resources. It is interesting to observe that for most of this group the absence of provision of appropriate support far outweighed the influence of teachers' instructional style.

When the resource issue relevant to these four cases is examined, the critical factor appeared to be the inappropriate deployment of resource personnel, whether they were resource teachers or teachers' aides. In one case, although the child participated three days per week in an effective, task-analysed reading program devised by the resource teacher, there was no coordination between resource room and the classroom, so that no assistance was provided directly to the class teacher. As a result the child spent most of his class time off-task in basic skill subjects, because his conceptual level in these areas was two grades below the class average. This reduced the class teacher's confidence in her ability to teach lower ability students so that she felt that a regular class was not the most advantageous academic placement for this child. This is, of course, not an uncommon reaction, despite research evidence to the contrary (Carlberg & Kavale, 1980), and can only be modified when resource teachers spend more time in the classroom.

Another example of inappropriate resource support occurred in a different classroom where a teachers' aide was provided for the target child for two mornings per week. No supervision of the aide or programming assistance was provided by the resource teacher and the aide simply withdrew the child to follow a program devised by herself, which was independent of the classroom program. Despite good social skills the child's subsequent inability to fit

into the classroom's academic program reinforced the teacher's anxiety about the effectiveness of his mainstreaming placement. This pattern of inadequate aide supervision was echoed in country schools, when teachers with no training in instructional strategies for low achieving students were required to instruct untrained teachers' aides for withdrawal work with these children. Teachers were also concerned about the over-dependence of the children upon aides produced by the withdrawal situation since it militated against independence in the home classroom. Consequently, despite the provision of resource personnel, many teachers and many pupils were not receiving the type of assistance which could have enhanced the quality of their educational environment.

In summary, it would appear that all children with intellectual disabilities will present ongoing challenges since they will generally need some modification of the classroom program. In the presence of appropriate in-class support these challenges can be satisfactorily met so that mainstream placement becomes a positive academic and social experience for the child and also improves the regular class teacher's instructional competence. Under these circumstances regular teachers will also become more skilled at maintaining that small but ubiquitous group of "normal" children who are also failing to achieve academically or interact socially within a regular classroom. If however, teachers without the necessary instructional skills do not receive effective resource support from qualified special education staff, the integration of children with intellectual disabilities will suffer as the anxiety levels of staff members increase. Moreover, if teacher aides are to be a valuable support to regular teachers, then they must be supervised by trained personnel, be they qualified resource teachers or regular classroom teachers versed in appropriate instructional technology. The aim must always be to integrate the child's program more efficiently with the class program and to increase his independence both academically and socially. It is pleasing therefore to see that within a departmental metropolitan region the Guidelines for using a Teachers' Aide (Special/Integration) emphasise that

"The teachers' aide is not provided to a particular child but is provided to the school so that the school has the capacity to enrol and educate the child."

This is a complex problem area and in view of the small sample size and the number of hypotheses that have been generated about the mainstreaming of some children with intellectual disabilities it is proposed to extend the sample considerably in Stage 2 and to include more children of this type who are being mainstreamed in upper primary grades.

CHILDREN WITH BEHAVIOURAL AND EMOTIONAL DISABILITIES

Five children classified as having behavioural/emotional difficulties were observed in this study. Three of these children were from country regions, two were from the metropolitan area and all but one were mainstreamed into primary classes. Some difficulties were experienced with the classification "behavioural/emotional" in that no distinctions were made between the two descriptors when the sample of children was initially selected. Thus the severity of the disability varied in each case with the result that two children in the sample had always been in regular classes (Case 20, 37) two had previously been in adjustment classes (9, 27) and the remaining child (36) was still in a regular class having refused recommended adjustment class placement.

Table 6 Integration of Children with Behavioural Disabilities

Case No.	Grade	INDICES OF INTEGRATION			Total Integ	Valid'n Index	Approp. Support	Instruct'l Style
		Academic %	Social %	Physical %				
9	6	75.0	48.3	66.7	62.8 *	58.0 *	68.8	39.0
20	6	95.0	83.3	100.0	91.7	100.0	100.0	59.0
27	5	63.3	51.7	66.7	59.6 *	35.0 *	87.5	51.0
36	4	85.0	58.3	88.9	75.6 *	77.5 *	75.0	46.0
37	1	60.0	38.3	77.7	55.8 *	55.0 *	37.5	43.0
Means:		75.7	56.0	80.0	69.1	65.1	73.8	47.6

* denotes less than effective integration

An examination of Table 6 indicates that as a group, children in the sample classified as behaviourally/emotionally disabled do not appear to be integrated effectively into regular classes. Together with children whose disabilities are classified as **multiple** they appear to be at the opposite end of integration effectiveness from children with sensory and physical disabilities (see Table 1). Moreover unlike children with physical and intellectual disabilities, the failure of children with behavioural/emotional disabilities to be successfully mainstreamed seems to be less grade dependent

than disability specific. This is perhaps because their overall low social integration scores tend to swamp their more successful academic outcomes (see Table 6).

In view of these rather pessimistic results it is instructive to examine in detail the one highly successful case of integration within this disability group (Case 20). The success of this child was no doubt related in large part to the less severe nature of her handicap in that she was one of only two students who had not been previously referred to an adjustment class. However, the appropriateness of resource support provided to her teacher must also be considered as a significant contributory factor. Her history indicated that, despite her classification as a behaviour problem she had always attended her local school. During fifth grade, however, her behaviour reached the point where exclusion was definitely considered as an option. Fortunately, at this point an intervention program, supervised by an itinerant teacher of the behaviour disordered was instituted. The I.T.B.D. showed the child's teacher how to implement the program in the classroom and the rest of the staff how to maintain it in the playground. In addition an individual program to remediate the child's below average skills in maths was also organised by the I.T.B.D. since her under achievement was considered to be associated with her behavioural difficulties. The child's teacher, whose instructional skills were among the most structured in the group, was then able to maintain these intervention programs independently once the consultant had been withdrawn. Consequently, by the time of observation, the child, without program support, was an integral class member whose overall indices of integration and validation were well in excess of the cut-off point for success.

While the failure of the four other students to be satisfactorily integrated could be principally explained by their disruptive and aggressive behaviour in school, an examination of the case studies indicates that the absence of appropriate support certainly exacerbated the situation (cases 9 and 37). Indeed, Case 9 was a student not dissimilar in behaviour to the successful child described above, but had not received any integrated intervention program. Even when the figures for appropriateness of support were reasonably satisfactory (Cases 27 and 36) the critical missing attribute for success appeared to be the absence of such a program acceptable to executive and

teaching staff and co-ordinated by a school consultant trained in behaviour management.

Although there is no doubt that the presence of a child with severe behavioural/emotional difficulties is stressful for the teacher, the situation can be significantly improved by well-designed support programs for both classroom teacher and entire school staff.

CHILDREN WITH MULTIPLE DISABILITIES

In this study each of the three children observed in mainstreamed classes had a physical disability compounded by developmental delay. Two were in country areas while the other attended a regular metropolitan primary school.

Table 7 Integration of Children with Multiple Disabilities

Case No.	Disab'ty	Grade	INDICES OF INTEGRATION			Total Integ	Valid'n Index	Approp. Support	Instruct'l Style
			Academic %	Social %	Physical %				
8	Phys/Intell	6	70.0	61.7	66.7	66.0 *	55.0 *	68.8	51.0
22	Phys/Intell	3	81.7	48.3	88.9	71.8 *	30.0 *	100.0	49.0
42	Phys/Intell	5	55.0	75.0	44.4	60.3 *	55.0 *	100.0	46.0
			68.9	61.7	66.7	66.0	46.7	89.6	48.7

Phys/Intell = Physical/Intellectual

* denotes less than effective integration

The results of Table 7 indicate that as a group, children with multiple disabilities could not be regarded as successful and their overall performance in terms of effective mainstreaming was the least of all disability categories studied (see Table 1).

Once again it appears that the combination of a physical and intellectual disability, like emotional disability, placed too much stress on regular classroom teachers. Teachers felt that they did not have either the time or the skills to handle such children in the class despite the high level of resource support provided, (see Table 1) and, surprisingly, despite the high appropriateness of that support (Cases 42 and 22). Thus the data for this disability group seem to indicate that even when appropriate resources are provided the disability per se tends to militate against successful mainstreaming.

Any inferences from such a limited sample, are of course limited in a statistical sense. However, case study analysis can isolate some of the variables which appear to contribute to the unsuccessful mainstreaming witnessed in this study. For example, the most unsuccessful case (42) was an atypical student because he suffered from a syndrome causing progressive mental and physical deterioration. Until the point where this condition

prevented his being an integral member of the class, both academically and socially, the integration situation had been completely successful. However, now, despite appropriate support, it was becoming increasingly apparent to all involved with the child's educational process that regular class placement was inimical both to his own progress and to that of his regular peers.

The failure of the other two cases (8 and 22) however, could be attributed to factors additional to the intrinsic characteristics of the disability. In both cases there had been discord between parents and the school staff about the children's mainstreaming. In one case, parents had resisted integration and were completely unsupportive of the placement. In the other, paradoxically, the parents had forced the placement upon a reluctant school. Consequently, staff attitudes towards the maintenance of both these children were negative and as each difficulty arose, however trivial, it was exaggerated by both parents and staff. This discord underscores the importance of school/home cooperation, a variable which, unfortunately, is an extremely critical one with respect to the successful mainstreaming of disabled children.

Resource availability is another factor which contributed to the perceived failure of these two children in the mainstream. In the case of one child (8) an integration aide was used solely for the child, so that he could participate in the academic program of the class. The use of an integration aide exclusively for one child had two disadvantages. In the first place it stigmatised the child and reinforced his atypicality. In addition it increased both the child's and teacher's dependence on the aide, so that each felt that the classroom situation was untenable whenever the aide was not there. If the aide had been used, under the teacher's supervision, to extend the skills of a small group of low achieving students including the target child, then the target child's independence, performance and social interaction in the class could have been significantly increased. However the classroom teacher had no guidance in the most appropriate use of a classroom aide, a situation which will doubtless improve under the new guidelines quoted earlier. It is also instructive to note that the academic performance of some of the Down Syndrome children with appropriate support exceeded that of Case 8, whose cognitive level was only in the mildly retarded range. A similar situation had also occurred in case 22, and the untrained teacher's aide was finally replaced by an integration teacher who managed to improve the child's

academic performance. In both cases, however, there was still a need to improve the children's social interaction, and neither teacher, teacher's aide nor integration teacher had considered the need for implementation of a relevant social skills program.

In summary, a child with a combination of physical and intellectual disability appears, from this study, to present real difficulties to a regular school. Furthermore, without adequate staff preparation, experienced resource personnel and positive parent/staff interaction, these problems are considerably magnified. Moreover, unless the resource staff provided can implement a program to assist the teacher to promote the child's academic skills in the classroom and social integration in the playground, it appears that a mainstreaming placement will be generally unsuccessful. As this sample, however, was small, the hypotheses generated will be tested when a larger number of children with multiple disabilities are observed in the next stage of the study.

OTHER GENERAL RESULTS OF THE STUDY

1. Summary of Child, Classroom and School Factors

While the detailed case study has isolated the two factors which in combination accounted for the greatest percentage of variance for effective mainstreaming, it is still instructive to consider the contribution of other measures to success in an integrated situation for children with disabilities.

Child Factors

The results of the study indicated that **disability** per se was not a significant correlate of effective integration. Rather it was the **appropriateness of support** provided to children within a disability category which accounted for their success in a regular class. When considering **demographic** characteristics, of the 27 successfully integrated children, 59% were from metropolitan areas and 41% were from the country regions, a difference which was not found to be statistically significant. Similarly, there were no differences among the five regions with respect to successful mainstreaming. From the case study analyses, neither **class size** nor the **grade level** of the child was found to be associated with success. However, it has been hypothesised that upper primary grades may be negatively correlated with success for children with intellectual delay and for below average children with neurological impairment in the absence of appropriate resource support. In addition poor **personal-social adjustment**, as exemplified by children with language and behavioural disabilities, may cause integration difficulties when resource staff or teachers do not experience any social skill management programs. Interestingly, **cognitive skills** were also not found to be predictors of integration success. Provided that resource support was appropriate and teachers were aware of relevant instructional technology, even Down Syndrome children at the lower end of the mildly-retarded range of ability were being effectively and enthusiastically maintained in the mainstream.

Perhaps the most sensitive issue that emerged from the case study analysis in terms of child factors was the question of **parental support**. Unlike the parents of children without disabilities, parents of mainstreamed children become a critical factor in a school's perception of the integration situation. Parents must be supportive without being aggressive, cooperative

without being intrusive, and particularly in the case of children with physical disabilities, available to provide "back-up" support when needed. Consequently the burden of maintaining a disabled child in the mainstream may prove to be very heavy particularly for single parents and those in financial difficulties.

Classroom Factors

In a consideration of the classroom factors which contributed to successful mainstreaming, **instructional style** appeared to be the most significant predictor of effective integration. This is an important finding for Australian policy makers because the use of structured instructional techniques has also been found effective for low achieving students in many overseas studies (see Larrivee, 1985). It emphasises the extreme importance of the quality of the interaction between the child and the teaching program, however defined.

Although less important as predictors of integration success, other classroom variables nevertheless emerged as positive correlates of effective mainstreaming. The results indicated that effective **classroom management skills** were significantly associated with the total integration index. Thus, when teachers were highly capable classroom managers and used either formal or informal positive reinforcement, children from all disability groups exhibited higher integration scores. Furthermore, although a warm and cooperative **classroom climate** was not significantly associated with total integration success, it was significantly related to **social integration outcomes**. This is a particularly interesting finding in view of the poor social skills exhibited by children with language disabilities and behavioural disorders. The importance of a cooperative classroom climate was also demonstrated by a child's self-report measure (Fraser & Fisher, 1983) which indicated that a low level of competitiveness, difficulty and friction in the classroom was significantly associated with higher total and academic integration success.

There was no evidence from this study that **instructional appropriateness**, which involved grouping children for instruction and individualising curricula, was associated with effective mainstreaming. As these particular instructional strategies have been found in other studies to be a positive correlate of successful integration (Larrivee, 1985), it is possible that the instrumentation for the measurement of this variable needs some refinement for Stage 2. Evidence of grouping children was taken only from teacher

questionnaires and self-report schedules, and therefore supplementary observational data will need to be obtained in order to validate the measure.

Similarly children's **time on-task** and teachers' **time management** were not found to be positively associated with childrens' total or academic integration outcomes. However, because observations in this study were mainly taken during seatwork, allocated time for basic skills was not systematically monitored, and difficulty levels for target children and controls were not computed, only a part of the variable **academic learning time** was used. It would thus appear necessary to measure all components of academic learning time in Stage 2 of the study, to fully assess its association with integration success.

School Factors

The results of this study indicate that the school variable which is the best predictor of integration success is the provision of **appropriate resource support**. Within the case study analysis an attempt has already been made to delineate the most effective resource support for each disability group. In general, however, it appears that to achieve the best results resource personnel must provide classroom teachers and other staff members with the instructional and social management strategies that will assist the disabled child to achieve academic and social independence. Furthermore, whenever a teacher's aide is provided, a classroom teacher needs guidance for the most effective deployment of such a resource person. It appears that the use of an aide specifically for one child either in the classroom or in a withdrawal situation will not be of maximal assistance to either class teacher or child.

The results of this study did not indicate any association between the way principals perceived their roles and effective mainstreaming. Whether principals saw themselves as administrators, staff facilitators or promoters of educational goals made no difference to the success of the integration situation. It was interesting, however, to note that principals in this sample were more positive both about retaining disabled children in regular class and accepting other children with similar disabilities than were their respective teachers. This finding corroborates the results found in large scale attitudinal studies (Center & Ward, 1987, Center et al, 1985). In summary only two factors emerged within total school ethos which seemed relevant to integration and these were the **attitudes** of other staff members and **particularly the attitudes** of the teachers participating in the target

child's integration. There were strong positive correlations between the attitudes of both groups and the total integration index. However, for most of the schools it would appear that positive attitudes are the **result** rather than the **cause** of effective integration. Both staff and target teachers who had little experience of integration tended to base their attitudes towards mainstreaming on the outcome of the current situation. Thus, if the child were perceived as successful, attitudes became correspondingly positive. However, in a small group of schools where a very strong commitment to integration existed, it was clear that attitudes had an important causal effect. Indeed in these schools integration was perceived to be successful even when academic outcomes were reasonably low. Thus, whenever a strong positive commitment exists towards integration within a school, there is a greater chance for that mainstream situation to be perceived as successful. Reciprocally, whenever a mainstream situation is seen to be effective, then teacher and staff attitudes become correspondingly more positive.

2. Academic Results of Target and Parallel Classes

One of the statements that is often made about mainstreamed students is that they may lower the academic level of the rest of the class by their frequent demands on the class teacher's time.

Table 8 Mean Maths Scores for all target and parallel classes.

<u>Classes</u> (N=16)	<u>Maths Scores</u>	
	<u>Mean</u>	<u>Sd</u>
Target	46.9	12.8
Parallel	48.9	11.8 *

* not significant at .05 level

From the results illustrated in Table 8, it appeared that there were no significant differences, at least in computational skills, between the classes with mainstreamed children and parallel classes without disabled children. Even when only the least successfully integrated students and their parallel classes were compared (ie. children with language, intellectual, behavioural and multiple difficulties) no significant difference was found between the two groups.

Thus from this study there does not appear to be any justification for the belief that the presence of a child with disabilities will necessarily lower academic progress at least in the area of basic maths skills. However adequate research in this area would require large scale studies well beyond the scope of the present enquiry.

DISCUSSION AND PROPOSALS FOR STAGE 2

Stage 1 of this study has been essentially a model-building exercise, designed to establish and trial procedures for use with a larger population in Stage 2. The results thus far obtained have indicated that while children with disabilities can be compared by disability groups, (see Table 1), the most pertinent data relevant to integration can be best analysed through case study methodology (see Tables 2-7). The results of case study analysis in the Stage 1 study have generated three major hypotheses.

1. that with appropriate support all children apart from those with progressive multiple disabilities will be successfully maintained in the mainstream
2. that with appropriate support and a structured learning environment, integration of children with disabilities will be highly successful
3. that without appropriate support, results in the mainstream will depend upon the positive interaction of child, parent, teacher and school characteristics.

In order to test these hypotheses, some refinements in **instrumentation** will need to be made in order to elicit the contribution of additional classroom and school variables to integration outcomes. In addition, the data thus far obtained indicate that for some disability areas, enough information has been generated. For Stage 2, therefore it is envisaged that the refined observational procedures will be used only in those areas of disability where Stage 1 has indicated that more detailed ecological studies are required. The justification for the new sample are outlined below, delineated in disability categories for ease of presentation.

1. Children With Sensory Disabilities

The 1987 case studies suggest that the integration of children with sensory disabilities, provided there are no compounding difficulties, is progressing effectively at primary school level. Thus it is considered unnecessary to proceed with more detailed investigations using a larger sample of these children and it is proposed that case studies of children with sensory disabilities be undertaken only at the secondary level.

2. **Children With Physical Disabilities**

The results indicate that for children with physical disabilities who have no associated learning difficulties, successful integration appears to be associated with the provision of appropriate access and/or aides-special from the time of enrolment. Therefore no further in-depth observations need to be pursued for this group at primary school level. It is hypothesised that similar criteria for effective mainstreaming will operate for children with physical disabilities at High School level so that in the interests of economy it is also not proposed to add a High School group of physically disabled students to the sample for Stage 2.

However, for children with physical disabilities of neurological origin, particularly those whose cognitive abilities are in the average or below average range, there may be associated learning difficulties which necessitate ongoing resource support. There is some indication from the case studies that such children may face greater difficulties as they progress through the school system. Therefore for this group it is proposed to carry out follow-up observations on those children from the pilot study who are moving from infants' to primary grades. In addition more case studies of children of this type, particularly in upper primary classes, will be included in Stage 2.

3. **Children with Intellectual Difficulties**

As the case studies appeared to indicate that there is wide variability in the effectiveness of the integration process for this group, it is felt that more intensive case study work at the primary level needs to be continued with this group. Furthermore it is felt that new directions in Stage 2 should encompass the role of the IM, IO and IS integrated classes/units in the effective integration of the intellectually disabled children.

4. **Children With Multiple Handicaps**

As the integration of these children has also been found to be somewhat problematic and as the number sampled was only very small, it is proposed that follow-up observations on those children identified in Stage 1 plus an additional group of new children be undertaken in 1988.

Discussions with the Department of Education have indicated that these are the four groups of disabled children whose integration is of primary concern. Thus it is not proposed to include any children with behavioural/emotional or language disabilities in Stage 2. Consequently, observations on 55 children from these four disability groups in mainstreamed classes and 15 children in support classes for the intellectually disabled will be undertaken in Stage 2. The suggested sampling procedure for 1988 is attached.



PROPOSED SAMPLE FOR 1988 FUNDED BY N.S.W. DEPARTMENT OF EDUCATION

A. PRIMARY / INFANTS

1. New Sample:

Children with	* Intellectual Disability	=	15
	* Physical (with associated learning problems)	=	5
	* Multiple Disabilities	=	<u>5</u>
			25

2. Follow up of 1987 Sample:

Children with	* Intellectual Disability		3
	* Physical (with associated L.P.)		<u>4</u>
			7

TOTAL PRIMARY/INFANTS 32

By Regions	Metropolitan	=	14
	Western	=	6
	Hunter	=	6
	Illawarra	=	<u>6</u>
			32

B. HIGH SCHOOL

1. New Sample:

Children with	* Hearing Impairment	=	10
	* Visual Impairment	=	<u>10</u>
	Total with Sensory Impairments		20

2. Follow up of 1987 Sample

Children with	* Intellectual Disability		1
	* Multiple Disabilities		1
	* Visual Impairment		<u>1</u>
			3

TOTAL HIGH SCHOOL SAMPLE 23

By Regions	Metropolitan	=	11
	Western	=	4
	Hunter	=	4
	Illawarra	=	<u>4</u>
			23

C. TOTAL SAMPLE BY REGIONS

	Children	Support Classes
Metropolitan	25	6
Western	10	3
Hunter	10	3
Illawarra	<u>10</u>	<u>3</u>
	55	15

Proposals for Extension of Study, 1988 - using projected funding from N.S.W. Crippled Children's Society, Down Syndrome Program, the Metropolitan West Region of the Catholic Education Office, The Special Education Centre and Newcastle College of Advanced Education.

As the Crippled Children's Society and the Down Syndrome Program have indicated their continuing interest in the integration study, it is proposed to add fifteen children with physical and multiple disabilities and three children with Down Syndrome to the sample funded by the N.S.W. Department of Education. As the Crippled Children's Society is also interested in units for the physically handicapped (P) it is proposed to include five of these units in the study, in both metropolitan and country regions.

Since the Metropolitan West Region of the Catholic Education Office has also provided funds for the study in 1988, an extra five children from the four designated disability groups and one support unit for the intellectually disabled will also be added to the study. It is also proposed to observe five children who have been integrated into regular classes after one year's withdrawal to the Special Education Centre using funds provided by the Centre. Thus the final effective sample for 1988 will contain 83 children and 21 support classes.

We hope the Department of Education will give permission to include these additional children and units whose observation will be funded by outside agencies.

REFERENCES

- Berliner, D.C. (1984) The Half-full glass - a review of research on teaching. In P.L. Hosford, (Ed.) Using what we know about teaching. Alexandria, V.A. Association for Supervision and Curriculum Development, 51-77.
- Brophy, J. (1985) Foreward. In Effective teaching for successful mainstreaming, B. Larrivee. Longman, New York & London, 1985.
- Brophy, J. (1979) Teacher behaviour and its effects. Journal of Educational Psychology, 71, 733-750.
- Carlberg, C. & Kavale, K. (1980) The efficiency of special versus regular class placement for exceptional children. A meta-analysis. The Journal of Special Education, Vol 14, (3).
- Center, Y. & Ward, J. (1984) Integration of mildly handicapped cerebral palsied children into regular schools. The Exceptional Child, 31, (2), 104-113.
- Center, Y., Ward, J., Parmenter, T. & Nash, R. (1985) Principals' attitudes towards the integration of disabled children into regular schools. The Exceptional Child, 32, (3), 149-161.
- Center, Y. & Ward, J. (1987) Teachers' attitudes towards the integration of disabled children into regular schools. The Exceptional Child, 34, (1), 41-56.
- Commonwealth Schools Commission (1984) Report for 1985, Canberra AGPS.
- Crisci, P.E. (1981) Competencies for mainstreaming: problems and issues. Education and Training of the Mentally Retarded, Vol. 6, 175-182.
- Fraser, B.J. & Fisher, D.L. (1983) Assessment of classroom psychosocial environment. Workshop Manual. Monograph in the Faculty of Education Research Seminar and Workshop Series, Western Australian Institute of Technology.
- Gage, N. (1978) The Scientific basis of the art of teaching. New York: Teachers College Press, Columbia University.
- Harvey, D.H.P. (1985) Mainstreaming - Teachers' attitudes when they have no choice about the matter. The Exceptional Child, 32, (3), 163-173.
- Horne, M.D. (1977) Assessment of classroom status: using the Perception of Social Closeness Scale. Paper presented at the annual conference of the American Psychological Association.
- Hudson, A. & Clunies-Ross, G. (1984) A study of the integration of children with intellectual handicaps into regular schools. Australian & New Zealand Journal of Developmental Disabilities, 10. 165-177.

- Larrivee, B. (1985) Effective teaching for successful mainstreaming. Teaching Research Association, Longman, New York & London.
- Larrivee, B. & Cooke, L. (1979) Mainstreaming. A study of the variables affecting teacher attitude. The Journal of Special Education, 13, 315-324.
- Medley, D. (1977) Teacher competency and teacher effectiveness: a review of process-product research. Washington, D.C. American Association of Colleges for Teacher Education.
- Moreno, J.L. (1934) Who shall survive? Washington, D.C., Nervous and Mental Diseases Publishing Co.
- Rosenshine, B. (1979) Content, time and direct instruction. In P. Peterson & H. Walberg (Eds.). Research on teaching. Concepts, findings and implications. Berkeley, C.A. McCutchan.
- Sadler, D. Royce (1985) Evaluation, policy analysis and multiple case studies: Aspects of focus and sampling. In Educational Evaluation and Policy Analysis, y, (2), 143-149.
- Thomas, D. (1985) The determinants of teacher attitudes to integrating the intellectually handicapped. British Journal of Educational Psychology, 55 (3), 257-263.
- Ward, J. & Center, Y. (1987) Attitudes to the integration of disabled children into regular classes: A factor analysis of functional characteristics. British Journal of Educational Psychology, 57, 221-224.
- Westwood, P.S. (1982) Integration of handicapped children in South Australia. Monograph Supplement, South Australian College of Advanced Education.
- Winder, R.B. (1988) Integration Statement (to be gazetted, February 1988)

APPENDIX
EXEMPLARY CASE STUDIES

CASE STUDY AMANDA

Disability: Hearing disability, profound

School No. 26 Newcastle Region

Grade: 5

Indices of Integration:	Academic	98.3%
	Social	96.7%
	Physical	94.4%
	Total Integration	96.8%
	Validation	100.0%

THE SCHOOL

School 4 is a Class 2 school in an inner suburb. The school consists of older style buildings, some single storey, some double storey. The playground is mainly asphalt, in poor repair in places, with a small grassed area around its perimeter. The infants and primary departments are on separate sites.

There is no school policy concerning the enrolment of children with disabilities, the principal stating that this policy is yet to be developed. School wide policies exist in other areas such as discipline, curriculum for specific subject areas, children with learning difficulties, school timetable, personal and staff development. The policy for school and class excursions is being formulated.

The principal has been newly appointed to this school this year. It is her first appointment as principal, although she has had 26 years' teaching experience. She states that she has had experience in the integration of disabled pupils in infants and preschool grades. On the School Priorities questionnaire, her highest priority is providing educational leadership to her staff.

THE CLASSROOM

Amanda's classroom in the old single storey section houses 32 year 5 children. Amanda's desk is in the front row, on the teacher's left. On either side of her sit her two special friends. Amanda has learned to lip read and the class teacher speaks clearly in her direction. However, should she miss a word or not understand an instruction, she turns to one of her friends, who will repeat it for her. Occasionally the teacher will request one of her friends to convey information to her.

THE TEACHER

The teacher, with 24 years' experience, has no training in special education. She has no discipline problems with this class. Unnecessary movement around the room and talking whilst working is not permitted. Her loud, clear voice is a great help to Amanda. The teacher is very conscious of her needs, usually speaking from the front of the class and in her direction. When the class is taken by a casual teacher, she always acquaints him with Amanda's needs. She feels great satisfaction in seeing Amanda coping with her work and

being happy in class. She says that the only increase in work load is that oral tests have to be written out for her. Classroom climate is usually quite cheerful, since the teacher has a keen sense of humour.

THE CHILD

Amanda is a hearing impaired child who lost her hearing at the age of 3 years. Besides her profound hearing loss, she also has cystic fibrosis, her deafness being caused by the life-saving drugs administered to her at this age. Because she had developed some language before she lost her hearing, she has some knowledge of the sounds of words. However she would have forgotten most of these early sound experiences. She has spent much time in hospital because of her cystic fibrosis. A simple infection involves immediate admission, with subsequent loss of school time. During the observation period, she had a deep cough which the class teacher says she tries to suppress, because she hates to miss school. The cough becomes worse in stressful situations such as tests. She is involved in an exercise program involving swimming, athletics and ballet.

PARENTAL ATTITUDES

Amanda has been at this school since kindergarten. Her parents made the decision that she should not be treated as a deaf child and so should be educated with hearing children. Her mother says that because she has always associated with hearing children, she does not consider herself to be deaf. Her mother considers the cystic fibrosis to be a far greater problem than the deafness. Her parents are very happy with her progress academically, socially and emotionally. They have nothing but praise for the school and the teachers.

PEER ACCEPTANCE

Observations in the playground indicate Amanda played appropriately in a large group of children for the entire observation period, sometimes with her special friend and sometimes in a different group from her friend. The current popular game was "marbles", at which she seemed quite expert. She was happy and completely accepted by her peers.

The complete peer acceptability observed in the playground was also observed in the classroom. Her two special friends who sit on either side of her are always willing to fill in the gaps should she miss anything. This is especially helpful to her when the class is taken by a casual teacher or a student teacher. She sometimes has difficulty lip reading a different teacher and a bearded teacher can be particularly difficult to lip read. Various teachers stated that the whole school and indeed the whole community is very supportive of her. If her special friend is absent from school, other children make sure that her needs are met and that she catches the right bus home. She has friends who come to her home to play, and she goes on outings with them and their families.

USE OF RESOURCES

The itinerant support teacher comes for one hour after recess on Mondays and Wednesdays. The lessons are taken in the withdrawal situation. The teacher works on Amanda's speech, and on her vocabulary and comprehension, both of which are weak. She works in consultation with the class teacher, reinforcing work which is being done in class. Amanda is a perfectionist and hates to be seen to make a mistake. The support teacher is trying to make her rely more on the understanding of concepts and less on rote learning.

The support teacher feels that this integration has been successful because of the child's zeal for perfection. She will go to any lengths to succeed. Also important are a sympathetic staff, caring friends to fill in the gaps in information and a no-nonsense attitude from her family. She has never been treated as a deaf child.

CONCLUSION

There has been no difficulty in integrating Amanda because she has always attended this school and she has never been treated as a deaf child. The only concern has been that voiced by the itinerant teacher that she may be relying too much on the child sitting beside her to obtain information in class. It would be preferable for her to learn directly from the teacher, because the other child might misinterpret the information. Occasionally, her friend was seen to relay the answer as well as the question. Because she hates to be different, when she moves to a different room, eg. the library, she positions herself towards the back of the class, and consequently has to rely even more on her friends for information. Visiting staff have to be made aware of her presence in the class and her needs.

As Amanda's integration index of 96.8% shows, her integrated situation has been very successful. Academically, although she has some difficulty with vocabulary and comprehension, she is under pressure to keep up in the classroom. Socially and emotionally, the integration seems a complete success. Teacher, parents, principal and the itinerant support teacher all agree that her present placement is appropriate and that she should continue in an integrated placement in the future. In view of the serious nature of her physical condition, this must be considered an extraordinarily successful (and heartwarming) example of integration in practice.

CASE STUDY MALCOLM

Disability: Physical disability (spinal atrophy)

School No.14 Metropolitan West

Grade: 1

Indicies of Integration:	Academic	98.3%
	Social	98.3%
	Physical	77.7%
	Total Integration	93.6%
	Validation	100.0%

THE SCHOOL

This small metropolitan west school is set in rural surroundings and consists of scattered buildings as well as some demountables. The area from which it draws its children contains a shifting population, so that the turnover of children in each grade is quite significant. Although primary and infants rooms are separated physically, the small staff all meet together in the staff room and the principal is usually present both at morning tea and lunch. The staff are friendly and helpful, so that an observer can fit very easily into the school routine.

The choice of this school for Malcolm was initially appropriate because it is his nearest neighbourhood school and it is all one level. It was also considered appropriate for a visually handicapped child because of its accessibility and he is brought here every day by taxi service. However, although preparation for Malcolm's enrolment was organised early, with meetings between parents and staff where needs were discussed, the requested ramps and aide-special did not arrive in time for enrolment at beginning of kindergarten. Malcolm's enrolment was thus deferred until the support requested was provided. Eventually, under Commonwealth funding, a casual aide-special arrived on a term basis and Malcolm was accepted at the beginning of Term 2. Shortly after enrolment, ramps for the infant's school were also provided but a toilet for handicapped children has not yet eventuated. All staff at the school have been instructed not to lift Malcolm, who cannot ease himself in and out of his wheelchair. Therefore it is essential for the aide-special to be present every day so that he can be taken out of his wheelchair and have 30 minutes in calipers standing at his desk.

THE CLASSROOM

Malcolm's classroom is a pleasant sunny room, further enhanced by the trilling of the pet budgerigar. The only difficulty about it as far as Malcolm's teacher is concerned is the lack of physical space which is needed when a child has a large wheelchair and specially built desk. For the first 6 months of the year there were thirty-five children in Malcolm's class which exacerbated the situation but now five have been placed in another class so the problem is somewhat less critical. About 10 every morning Malcolm's mother comes to the classroom to take him out of the wheelchair and put him into calipers so that he can have standing practice at his desk. At this point in the classroom's routine, Malcolm's teacher schedules seat work so his standing activities can be accommodated. After half an hour his aide-special

arrives to remove his calipers and lift him into his wheelchair. Once in his wheelchair, Malcolm is completely mobile and wheels himself to all activities. In general, however, movement around the classroom is restricted by lack of space. Whenever there is a change of class activity or recess, Malcolm's closest friend usually wheels him out to the appropriate location.

THE TEACHER

Malcolm's teacher is young, with 8 years of teaching experience, and has a pleasant but firm manner with her young students. Discussions with her students indicated that they thought it was fun to be her class. She emerged as one of the most structured teachers in the sample, with excellent classroom management skills and the ability to promote a warm, cooperative class climate. At the same time she demanded a high academic and social standard from her pupils and was very careful to assess their progress continually. Thus, although she was well aware of the strategies that would enhance learning for a non-streamed class, she was also able to promote the social well-being of individual students.

Because Malcolm's school is a small one, his teacher was the only logical choice for him, as no parallel class existed. However, discussions were held before he entered the class and his teacher was aware of the physical problems his presence would entail. In accordance with the principal's wishes and because she supports union policy, Malcolm's teacher is unable to lift him, so all handling in and out of the wheelchair must be done by his mother or his aide.

THE CHILD

Malcolm is an extremely attractive, well-cared for, polite and quiet little boy whose disability of muscular atrophy was diagnosed at 9 months of age. This particular disability affects only the lower limbs so that hand function is normal and no associated learning problems of neurological origin exist as may happen with cerebral palsied children. At this stage he cannot manage to ease himself in and out of his wheelchair so is totally dependent on his aide for that activity. However, once in his wheelchair he is quite mobile and his friends are very eager to push him around the playground. As one of his little friends remarked, "My arms get sore but I'm his best friend, so I get to do the pushing."

Malcolm does not need any curriculum modification because on tests of basic skills he is in the top 20% of his class. His teacher actually rated him as about average in his grade. He also emerged on the peer acceptance scale as extremely popular which was substantiated by his teacher when asked to rate him socially. Malcolm has at least 2 close friends in his class, who spend the night or play at his home regularly, and all connected with his integration placement, parent, principal, teacher, aide and counsellor, feel regular school placement is the most advantageous learning environment for him.

PEER ACCEPTANCE

Observations on the sociometric measure indicate that Malcolm is in the top 40% of social acceptability in the class. This objective assessment was confirmed by all persons in the school connected with his education as well as by his mother. His teacher indicated that the task of pushing Malcolm was almost regarded as a privilege and that Malcolm dispensed these favours rather regally. His mother took him to swimming classes together with non-disabled swimmers and was looking into enrolling him into cubs. At least two of his school friends came over regularly after school, and stayed overnight, visits which were reciprocated by Malcolm. These anecdotal statements were confirmed during classroom and playground observations when it was clear that Malcolm was a well integrated class member during both indoor and outdoor activities.

PARENTAL ATTITUDES

While Malcolm's mother may not have been as sophisticated about the educational options available to disabled children as were some of the mothers whose children had been through early intervention programs, she was nevertheless committed to regular school placement for Malcolm. Although she knew special school placement in a school for crippled children may have been easier on her personally, she was definitely opposed to such a placement on the grounds that Malcolm was a normal child and needed to be with normal children. He had attended a regular preschool without trouble and she did not foresee any difficulties with enrolment at his nearest neighbourhood school.

The principal who knew about Malcolm's impending enrolment, suggested to Malcolm's mother that she approach him well before the end of the year so that he could apply to the Department for resources. However, it appears that the principal's requests of ramps, a toilet suitable for handicapped students and an aide-special did not materialise at the beginning of the year in which Malcolm was to enrol. The position of the integration officer had not yet been established and the organisation necessary for such resource provision was not established. Without provision of resources by the Department, the principal would not accept this enrolment, despite the parent's entreaties to build ramps themselves and volunteer as daily aides. The principal's views were that it was the Department's responsibility, not that of the parents and therefore admission to school was delayed. Although Malcolm's parents knew he could be enrolled at other public schools further from home, they wanted him at his nearest neighbourhood school and they were encouraged in their determination by the new integration officer. Eventually resources arrived, partly funded by the Commonwealth and Malcolm commenced kindergarten in term 2, 1986. His mother still comes to the school every morning to help him into calipers before the aide-special comes to work. She also assists the whole school with gross-motor activities and is available whenever necessary for assistance on excursions.

USE OF RESOURCES

Unlike some of the other children in the sample with physical disabilities, Malcolm's disability is not of neurological origin and he does not have any associated learning disabilities. Thus resource provision for him involves only the provision of suitable access, modified toilets and the services of an aide-special for mobility. Provided these are present from the point of enrolment there should be no difficulty associated with the integration of a child like Malcolm for whom no educational problems are envisaged. In

Malcolm's case, however, such resources were not organised from the moment he was due to start school, so tensions and anxiety were aroused from the beginning, and enrolment was delayed. When resources finally arrived the aide was funded by the Commonwealth Integration program and was thus only a casual employee. Thus neither parents nor school could be sure that funding would be provided for the following term, so that continual enrolment could only be provisional. Thus for the first 3 terms of Malcolm's enrolment, neither the resource support nor his integration could be regarded by his parents or school as assured.

CONCLUSION

There is no doubt at all, from all those associated with Malcolm's schooling, parent, teacher, principal and aide-special, that his integration is extremely successful. This is exemplified by his integration index of 93.6%. He is a child with good academic and social skills, whose only problems are mobility ones that need ongoing support. His teacher will not need additional skills to handle him effectively in the classroom. However she will need additional time involvement if the resources are not promptly and continually provided. The question arises as to the role of the school in acquiring these resources if the Department does not supply them on request. It can adhere rigidly to union policy, which generally means that if parents are persistent enough, the resources will eventually come, but in the interim, child and parent suffer by delayed enrolment. If the school takes a humanistic view and accepts a child without the everyday resources, then the principal and staff will be required to expend additional time and even undergo physical risks involved in lifting etc, and resources may be continually delayed. Neither parent nor school should be placed in either invidious position. Appropriate resources must accompany every child with a physical disability who needs mobility assistance.

Disability: physical disability of neurological origin (cerebral palsy)

School No.1 Metropolitan North

Grade: 2

Indices of integration:	Academic	81.7%
	Social	91.7%
	Physical	83.3%
	Total Integration	85.9%
	Validation	95.0%

THE SCHOOL

This metropolitan north infants school is pleasantly set among extensive leafy grounds on one level so that it provides reasonable access for students with physical disabilities. Ramps have been erected to some classrooms which are elevated, as well as to the washroom and toilets. The infants campus is separate from that of the primary school so that opportunity for communication between the two groups of staff is reduced. At the time of observation, however, the school principal was on leave so that the deputy mistress (infants) was acting principal of the school and provided a greater degree of liason between the two departments.

It was evident from infants staffroom talks and discussions with both the school counsellor and resource teacher that the school had a strong positive commitment to integration. Furthermore, executive staff had prepared teachers for the arrival of a disabled child prior to enrolment. Both the deputy mistress and school counsellor had visited the special school which Larry attended for a necessary exchange of information. In addition, Larry 'visited' the regular school one day per week for a year on a trial basis prior to full-time integration in grade 1. Thus staff and students were aware of the mobility difficulties that would arise when he joined the school on a full-time basis.

Apart from Larry, the infants department has mainstreamed two children with moderate/severe visual difficulties receiving assistance from an itinerant teacher of the visually impaired, one child with behavioural difficulties and one child who is emotionally disabled. Neither of the two latter children are presently receiving assistance although the more severely disturbed child is awaiting assessment. The school employs a full-time aide who is released from clerical duties by the deputy mistress to assist on excursions which Larry attends. Larry's mother also provides assistance when required. An aide-special provided for Larry by integration funding on his enrolment has been discontinued because she was felt to be overprotective and hence counterproductive to effective integration.

THE CLASSROOM

Larry's classroom is a large, sunny, carpeted room where 30 children work grouped around five tables. Larry sits at a specially designed table adjoining the regular table at which four other children work. This does separate him slightly from his classmates and lessens to some degree the interaction during Language Arts activities. However, as he joins a regular table for maths lessons and participates in all mat activities, this slight separation is probably not significant. He is independent in the classroom with the aid of two sticks, but because his movements are slow, his peers, encouraged by his teacher, tend to get class materials for him from the other side of the room. Larry has come to rely upon this assistance and it has generalised to include his wanting help with work as soon as it proves difficult. Although he is never disruptive in the classroom he contributes very little to group discussion but usually asks help from his friends or his teacher soon after independent seat work is initiated.

THE TEACHER

The Infants Mistress suggested to Larry's mother that he would be best placed in this particular second grade because of the specific attributes of the teacher. Although she has no special education qualifications, she is a well-organised, dedicated, mature and compassionate teacher who is also the Infants Mistress. In a comparison with other teachers in the sample she emerged in the top quartile with regard to the use of appropriate teacher strategies, with particular strengths in instruction style, instructional appropriateness, class management and in the maintenance of a cooperative class climate. Although well-organised, her presentation of material was not particularly fast-paced which may partially account for lower scores on time-on-task results which were particularly noticeable in the case of Larry. This teacher spent a considerable amount of time when her students were engaged in independent seat work working individually with Larry and her behaviourally disturbed pupil to ensure that they remained on-task. Larry has been provided with a typewriter in seat work by the regional office to assist in independent work. However, technical difficulties associated with its use have actually impeded rather than fostered Larry's independence, and a simpler machine is currently being investigated. It has been suggested that Larry practise on it at home rather than at school, where his willing teacher has been frustrated by its constant breakdowns.

In conclusion it is felt that Larry's teacher has been an extremely wise choice for a child experiencing difficulties and both Larry's parents and all support staff reinforce this view. However, her management of Larry would be facilitated by expert assistance in keeping him on-task during independent seat work, in addition to the extra individual maths remediation he is now receiving. This will be discussed at greater length in the conclusion.

THE CHILD

Larry, an extremely attractive, well-cared for child, has cerebral palsy which has affected the lower more than the upper limbs. Thus he needs two sticks for independent walking on a flat surface and assistance in negotiating stairs. A physiotherapist who visits the school fortnightly is teaching Larry to manage the steps to his current classroom without assistance. His mother has acquired a small motorised vehicle which can be used by Larry on the sloping ground of the school yard. Other children in the playground express

great interest in this car and it is not uncommon to find them riding it while Larry waits patiently for its return. Larry uses his car to access more remote areas of the playground where dancing and P.E. take place and to which walking on sticks would exhaust him. He also receives physiotherapy at his former special school at a time which is synchronised with the regular school's sport afternoon, so that no formal subjects are missed. Swimming lessons in a hydrotherapy pool are also attended so that he can join fully into the school's summer sporting program.

As far as basic skill subjects are concerned, Larry is one of the two lowest achievers in maths and in the bottom 20% of his class in Reading/Comprehension. This level of achievement substantiates the research evidence that children with neurological involvement who are not in the high average range of intellectual ability, will need assistance in the classroom so that they do not fall markedly behind in basic skill areas. It appears that for such children the difficulty level of the subject is exacerbated by the child's physical problems, so that greater than average motivation is required both to attend and to complete an academic task. In Larry's case, classroom observation indicated that his on-task behaviour is almost one standard deviation below the mean of his class. However, off-task behaviour in Larry's case does not mean he causes any disruption in the classroom. He is an extremely well-behaved child and needs no behaviour modification program in this regard. However, it does mean that whenever his teacher does not respond to his constantly raised hand, he ceases to be actively involved in his set task and he completes very little of the required assignment. Although Larry receives resource support for half an hour per week for maths in a withdrawal situation this does not appear to increase his attention span in independent work in the classroom, even in maths areas.

PEER ACCEPTANCE

Observations indicate that Larry is well accepted by his peers both in the classroom and in the playground and this was substantiated by a high social rating scale provided independently by his teacher. He has two close friends in his classroom with whom he sits for all academic activities other than maths and they assist him physically in every way possible, eg. accompanying him to the toilet, putting his car away, getting library books etc. In the playground, as he moves around in his motorised cart, he was not observed to be isolated in any outdoor activities. Although his classmates invite him regularly to their birthday parties, his mother has recently begun to refuse these invitations because they necessitate her continual presence. Instead he plays most appropriately with his next-door neighbour and with his brother.

PARENTAL ATTITUDES

Larry's mother is the main driving force not only behind his initial integration but also behind his degree of integration success. Having decided that special school placement at the infants level was not in his best interests, either academically or socially, she presented him for enrolment into kindergarten at his nearest neighbourhood school after he had already completed kindergarten class at his special school. The previous year he had spent three days a week in the kindergarten class of his special school and two days per week in a regular pre-school. The regular school would accept him only one day per week in the kindergarten class, so for that year he spent the remaining four days in first grade at his special school. Larry's mother was determined to achieve full-time integration and single-handedly she

tackled the principal, the region and the Department. However, her persistence never developed into aggression and she always had the full support of the infants mistress, the staff and the mothers' club in her endeavours. This point needs to be stressed because the school's attitude towards the parents of a disabled child appears, at this stage, to be a critical factor in the observed success of an integration placement. Eventually, Larry's file received sympathetic consideration by the Education Department, ramps were constructed in various infants school areas and full-time integration commenced in first grade which he had already completed in his special school.

However, Larry's mother did not see all her involvement as ending here. Aware of the provisional nature of integration accorded under the enrolment policy of children with disabilities, she arranged consultant physiotherapy services at the school, sought and found a suitable vehicle for negotiating the playground, synchronised his extra therapy needs with the school sport afternoon, accompanied all school excursions, even though the staff at the school were extremely supportive, and assisted in regular class reading groups. Parents of children with disabilities who are integrated into regular classes are very much aware that for their children at this stage education is a privilege rather than a right.

USE OF RESOURCES

The infants department at Larry's school has been extremely supportive of his integration to the extent that they had the aide-special provided by integration funding withdrawn because her over-protectiveness actually impeded the normalisation procedure. The infants mistress now releases the school aide from clerical duties so that she can assist Larry and his teacher whenever a class excursion is planned. However, as has been previously stated, Larry's mother also accompanies the class to provide further assistance.

There are three other support staff who have been involved in Larry's integration. The school counsellor was initially part of a team who visited Larry's special school to ease the enrolment process but has not maintained an active role since that time. He believes that at this stage the integration process is proceeding sufficiently well not to warrant interference. However, both he and the infants mistress express some apprehension about Larry's progress in primary school. This year, the school resource teacher has been taking Larry in a small withdrawal group for maths remediation. While the resource teacher feels he is improving she does not undertake any assessment procedures and only maintains very informal contact with Larry's teacher on a fortnightly basis. Finally, Larry's mother has managed to secure the services of a visiting physiotherapist whose aim is to increase Larry's independence on the stairs. Unfortunately, the services of this physiotherapist are at a premium so while the aims are exemplary, the execution suffers from lack of time.

CONCLUSION

From Larry's total integration index of 85.9% it is obvious that his mainstreaming process must be viewed as successful. There appear to be a number of reasons for this level of success. In the first place Larry is an extremely presentable child with a physical disability but with no disruptive or atypical behaviours. His mother, too has been responsible for obtaining much of the extra assistance which he needs and maintains an active and positive role within the school. In addition, the positive attitude of the infants school, the warmth and competence of his teacher and the as yet undemanding nature of the curriculum have guaranteed that he does not appear to be too different from his peer group.

However, there have been no systematic changes within the school teaching system or support staff to accommodate children with disabilities integrated into the regular classes. Thus teachers are not aware of the most effective strategies which they can utilise in a classroom with a large range of ability. Although Larry's teacher scored highly on effective teacher techniques compared with the rest of the sample, there are still many strategies of which she is unaware, eg. grouping in basic skill areas, different work for different students, and the use of more guided practice. Similarly, the resource teacher does not realise that Larry's on-task activity must be increased in the classroom which will be the key to his effective performance particularly at primary school level. It is only by improving the quality of service delivery at the school level that the quality of integration will be increased.

CASE STUDY TANYA

Disability: Language

School No.19 Metropolitan West

Grade: 3

Indices of Integration:	Academic	91.7
	Social	91.7
	Physical	100.0%
	Total Integration	93.6%
	Validation	100.0%

THE SCHOOL

Tanya's school is a small, older style school in Sydney's western metropolitan region. The community from which the children are drawn is rather mixed both racially and in terms of socio-economic background. Between a quarter and a third of the school population come from a non-English speaking background.

The school principal is new to both the school and the role of principal. Although he has as yet had little first hand experience, he is very supportive of the concept of integration. At the time he was interviewed he had just accepted the enrolment of a severely emotionally disturbed child who had been attending a special unit for the emotionally disturbed. The only other child at the school who was integrated was a child who had been in an OA class for several years, but had been integrated this year at the parents' request. No special integration resources had been sought by the school for either this child or the target child.

THE CLASSROOM

Tanya's class is a mixed ability class, but with two fairly distinct groups - one of high ability and one low. The teacher reported that this had been a deliberate school policy this year: the middle ability group of children for the grade had been placed in a composite 3rd/4th grade. This represented a change of grouping from previous years (when the top ability group tended to be placed in a composite class) and the teacher found that a good deal of time and effort was required early in the year to try to build up the cohesiveness of the class as a whole. One strategy used was to seat a low ability child next to a high ability child so that the latter could both assist and get to know the former. Various games aimed at getting to know each other and recognising the individual strengths of each child in the class were also used.

The success of these efforts is reflected in a relatively high level of satisfaction and low level of friction in the class and a generally warm classroom climate. All children interviewed (including Tanya) reported that they liked being in that class and most singled out "friends" and/or the teacher as the main reason for liking it.

The general atmosphere in the classroom is pleasant, but quiet and efficient. The average level of task engagement is high, and there is very little "down time" due to teacher and student transition between tasks. When set tasks are completed, children generally carry on completing other work or selected a book for silent reading. More formal "seat work" tends to be broken up with periods on the mat at the front of the classroom for group teaching, news, oral reading or listening to the reading a story. The teacher believes these group times are important because they provide a chance for close physical contact with herself and each other. Such closeness, which is common in infants classrooms, is often absent at the primary level.

THE TEACHER

Although Tanya's teacher was trained some eight years ago she has worked as a relief teacher for a number of years and this was only her second year of full-time teaching. Nevertheless she has a quietly confident approach to teaching. She is very efficient and well organised, and this is reflected in very little "down time" in the classroom. Work is prepared on the blackboard before the children arrive and the children appear to know and follow routines well with minimal direction from the teacher. Her approach to teaching in basic academic areas is very structured, with a lot of guided practice given on new concepts before the children undertake independent practice.

Her relationship with students is warm and she demonstrates a personal interest in and concern for each child. The children appear to respond well to her quiet manner and high expectations of behaviour. There is not a competitive atmosphere in the classroom, and the more able students are encouraged to help the less able. Individual differences are recognised. The teacher is aware of what each child is capable of achieving and there is a clear expectation that each child will strive to do his or her individual best.

THE CHILD

Tanya was a premature baby whose language was markedly delayed at the preschool level. Her preschool teacher referred her for special assessment. As a result, Tanya was enrolled straight into an OL class which she attended for two years. She was enrolled in her local school in 2nd grade as a regular pupil - i.e. not under the "Enrolment of Children with Disabilities" policy, as no additional resources were considered necessary to support her enrolment.

Although her language is occasionally slow and a little stilted, it does not "stand out" in a school with a large proportion of children for whom English is a second language. She is at present functioning in the bottom third of the class, and is one of the "remedial" group who receive resource teacher assistance, but is reportedly coping well within this group. Her application in class is good, and her engaged time in academic subjects is slightly above the average for the class as a whole.

PEER ACCEPTANCE

Tanya was not initially very happy with the change, but now enjoys her new school and appears to be fully accepted as a member of the school. She is well accepted by her peers and is quite indistinguishable in the playground joining in happily in group games.

PARENTAL ATTITUDES

Tanya's parents are divorced and she lives with her mother and younger (preschool aged) brother in rather deprived circumstances in two small rooms at the back of another house. At the time of the interview Tanya's mother was worried that she was shortly going to have to move and as she had nowhere else to go, Tanya and her brother may have to go to live with their father whom they visit each weekend. Subsequently, the principal reported that he was writing to support her application for urgent consideration for government housing in the area. She had been on the waiting list for some time.

Although Tanya's mother had no say in her transfer from the OL class to the local school (the normal progression after a maximum of two years in an OL placement), she was happy with the move. Tanya can now walk to school and back (with her mother) and has made friends locally.

Tanya's mother is not well educated, and therefore is unable to help her at all with her schoolwork. For this reason, also, she has had little involvement with the school, preferring not to interfere in any way. However, she is pleased with Tanya's progress, both academically and socially, and is confident that the school staff know, and will do, what is best for Tanya.

USE OF RESOURCES

Most teaching in the class is done on the floor at the front of the classroom. The children are grouped for instruction in all academic areas. The bottom third of the class, which includes Tanya, constitutes a "remedial" group who has intensive basic instruction in maths and reading twice weekly with the resource teacher. Communication between the resource teacher and class teacher is good and decisions about appropriate programming for this group are made in close consultation between the two. While this lower group works in a separate room with the resource teacher, the class teacher gives extension work to the remainder of the class. Both reported that they had tried to undertake this using a "team teaching" approach, but that the smallness of the classroom did not lend itself well to two groups working separately with two teachers. The weaker group, in particular, tended to be distracted. Tanya functions close to the top of the "remedial group" and both teachers feel that this is good for her self confidence and self esteem. The resource teacher, like the classroom teacher uses a very positive, supportive approach to these weaker students and all appear to enjoy this time away from the rest of the class.

CONCLUSION

Overall, Tanya's transition to a regular class from OL placement has been very successful both academically and socially. She functions well within the class and is considered by everyone to be just another member of the school. Her continued integration is taken for granted by all involved. Tanya's "success" must be at least partly attributed to the caring attitude and effective strategies used by her present teacher. Her individual academic needs are being well catered by the coordinated approach of the resource teacher and class teacher, while her social integration (which is sometimes problematic for children with language difficulties) has undoubtedly been enhanced by her teacher's efforts at fostering a cohesive and cooperative classroom environment.

Disability: Intellectual (Down Syndrome)

School No. 13 Metropolitan West

Grade: 2

Indices of Integration:	Academic	91.7%
	Social	83.3%
	Physical	88.9%
	Total Integration	87.8%
	Validation	97.5%

THE SCHOOL

The school is a pleasant, modern school in a semi-rural area on the outskirts of the Sydney Metropolitan area. The school population is fairly homogeneous and is drawing from an average socioeconomic, largely English speaking community. It is a kindergarten to grade six school, with only one staff room, and communications within the school appear to be good. The principal mixes freely with the staff in the staff room and is clearly approachable. He has formal qualifications in special education, and is committed to the principle of integration with appropriate support services. As a principal, he gives equally high priority to providing educational leadership within the school, and promoting affective goals (such as a warm and accepting school climate, and harmonious working relationships between staff, students, parents, and the community).

The staff in general appear to support the integration of children with disabilities. The enrolment of a second child with Down Syndrome and a child with cerebral palsy is at present being examined for 1988.

THE CLASSROOM

The second grade class is a fairly noisy, exuberant class, with several children who exhibit clear behaviour problems (ie. are off task, out of seat and at times disruptive). The children were seated in rows of double seats. The teacher explained that she had reorganised their seating from groups of 4-6 to rows because of their noisy behaviour. The class had been told that they could return to group seating when they demonstrated that they could behave appropriately. The teacher reprimanded the class quite often - particularly the 3 or 4 worst behaviour problems. This approach did not have an observable effect on their behaviour, and tended to make for less warmth in the classroom climate. Nevertheless, the children seem to enjoy being in that class and to like their teacher.

THE TEACHER

Annabel's teacher is relatively young, and had not had any previous experience with integrating a child with a disability into her class. Moreover, she had previously been teaching an upper primary class. For these reasons, the principal felt that she needed a lot of support to assist her in integrating Annabel, and has provided her with increased aide time as a result.

Although the teacher does not use a highly structured approach to teaching, she does group and individualise instruction more than the average teacher in our sample. In particular, she was observed to give extra instructional time (either in a small group, or 1:1) and extra guided practice to the bottom group of children, including Annabel, in both maths and reading. Just after the observation period finished, a new cross-grade reading scheme, using some parent volunteers, was introduced for second grade. Annabel is now in the bottom of ten groups across all second grade. The integration aide accompanies Annabel so that she can assist the teacher with that group of slower readers.

THE CHILD

Annabel, the oldest of four children, has Down syndrome and attended a university-based early intervention program from infancy. Her mother approached her local school to enrol Annabel when she was 5.5. After consultation with regional guidance staff and teachers at the early intervention program, it was felt that Annabel was still very small and immature, and would thus benefit from a further year of early intervention prior to starting school. Meanwhile, thought could be given to planning appropriate support services to assist in her educational integration at school.

Annabel thus began school a year later and is still at least one year older than her classmates. However, physically and socially she fits in very well with this slightly younger group. Annabel has received very good support from kindergarten on and this has undoubtedly contributed at school. She is presently functioning in the bottom 1/5 of the class in both maths and reading, but several other children are performing at a similar level to her ie. about one grade level below the class average.

Her behaviour in class is generally good with just an occasional 'show-down' when she refuses to co-operate with adults. However, all staff are consistently firm but kind in their approach and this is helping her to fit in with her peers. Very few 'allowances' are made as it is felt that she must not be treated as 'special' if she is to be truly integrated.

PEER ACCEPTANCE

The class accepts Annabel very well. They are always willing to help her in any way, and are very tolerant of any slight social behavioural deviations. The class also encouraged Annabel with her work and are visibly pleased and proud when she exhibits her skills or succeeds at a challenging task. Although Annabel scored in the bottom 1/5 of the class in terms of peer acceptance on a sociogram, the teacher felt that this underestimated her degree of social acceptance in the class.

PARENTAL ATTITUDES

Although Annabel's mother is very pleased that she has been accepted by the school, and is making good progress there. She emphasised that she would not push for her to be integrated against the school's wishes. She hopes that Annabel will ultimately be able to attend normal high school with her younger sisters and brother, but is realistic in her attitude and expectations. If the professionals decide at any stage that Annabel's needs would be better met in a special school or class, she would accept their expert opinion, although she would clearly be disappointed.

USE OF RESOURCES

Services available to assist with Annabel's integration have always been very good. A highly qualified and experienced special education teacher is available three mornings a week to plan and monitor Annabel's program. Last year she was full-time at the school, and was able to implement a daily program for Annabel. This year she plans her program and implements it with the assistance of the aide who is available to assist the class teacher for several hours each day. She generally works directly with Annabel giving her extra help in class work with which she has particular difficulty (such as maths and comprehension) and keeping her 'on-task'. When Annabel has completed her set class work, the aide uses worksheets prepared by the special education teacher to give her additional practice in basic maths and reading/comprehension skills.

Annabel's teacher is very happy with the support currently available to her, and arranges her class timetable so that the aide is present for those lessons in which Annabel is most likely to need 1:1 help. Communication with the special education teacher is good. One half-hour a week is set aside (while the class is at library) for them to meet to discuss Annabel's program. The special education teacher is also able to give advice in dealing with any behavioural problems that emerge. In this way, a consistent approach to these can be developed for all staff interacting with Annabel. Other staff members appear to be happy to adopt any such strategies that are suggested by the special education teacher.

CONCLUSION

Annabel's integration is considered successful by all involved. Much of this success, as the school itself is aware, is due to the availability of excellent support services. Undoubtedly the positive attitude of all staff members towards integration, and the generally caring and accepting climate at the school are also important factors. In this context a particularly effective class teacher is not critical to Annabel's success.

CASE STUDY RHONDA

Disability: Behaviourally Disordered

School No. 20 Metropolitan West

Grade: 6

Indicies of Integration:	Academic	95.0%
	Social	83.3%
	Physical	100.0%
	Total Integration	91.7%
	Validation	100.0%

THE SCHOOL

This student attends a medium sized school in Sydney's western metropolitan region. The surrounding community is relatively homogeneous, and only a small proportion of students come from non-English speaking families. The school has three OD classes and two OA classes as well as a preschool. The present principal was appointed at the beginning of last year and, perhaps because of the administrative complexity of the school, puts a high priority on administrative tasks. The present AP (Special) in charge of the support classes has a strong commitment to integration, and a number of the children from the support classes are integrated for varying periods of time into the regular classes.

Because of the existence of the support classes, the school was requested by the Regional Integration Officer to develop a school-based Integration Policy. This was accordingly given a high priority by the principal, and a group of staff has worked to develop a draft document under the leadership of the AP (Special). The draft policy was then discussed by the whole school at a pupil-free staff development day in September. The policy document is presently being revised on the basis of this "whole school" input.

Because of the composition of the school, and the historical integration of the deaf and OA pupils, the staff as a whole readily accepts the concept of integration at least of these pupils. The whole school is learning basic signing, and this is used in Assembly. There appears to be reasonably good communication within the school both among principal, staff, and support staff. This is aided by the fact that the itinerant teacher of the behaviourally disordered (ITB) and District Guidance Officer are physically located within the school.

The principal commented on the fact that so many of these special services (including the 5 support classes) are located within one school. The reason for this concentration is a pragmatic one: there was room available within the school because of a decline in student numbers. The principal pointed out that this situation placed an added administrative burden on him and his support staff, and was probably questionable from an educational point of view, ie. the concentration of 5 classes of children with disabilities within one school is well beyond the normal distribution of such children within the population. Clearly the full integration of such a large group within one school would be very difficult. Nevertheless he is very supportive of the

process of integration from the point of view of assisting the individual child to achieve his potential and to prepare him for life within the wider community.

THE CLASSROOM

Rhonda has been in the same teacher's class since the middle of last year, when her severe behavioural problems prompted her referral to an ITBD. The general atmosphere within the classroom is warm and relaxed, yet business-like. Some quiet chatter and movement around the class is tolerated by the teacher and in certain tasks students are encouraged to work together (either in pairs or small groups).

The two sixth grade classes are streamed across the grade for maths and reading so these subjects are timetabled for a set period each day. Rhonda is in the lower stream for both subjects. The lower reading group is taught by the other sixth grade teacher, while their own class teacher takes the lower maths group. All other academic work within the class is done on a contract system. Each student has his or her own individualised contract drawn up and agreed to at the beginning of each week. Such a system enables the teacher to individualise the academic tasks to suit the individual student's needs. Lower ability students are thus able to be given more practice in basic concepts, while higher ability students can be extended conceptually.

The class works very well on their contract work: their average engaged time on academic tasks during the observation period was 77%, higher than for most other classes in the study. The students also worked well on their cooperative tasks, and the general atmosphere was very harmonious. There were no discipline problems and the teacher rarely if ever needed to reprimand a student.

These observations about the class are confirmed by the results of a student survey: the My Class Inventory in which children answer questions about various aspects of their classroom environment. This particular class had the highest score of any school on student "satisfaction", and on class cohesiveness, and lowest of any school on friction, competitiveness and degree of difficulty of work (from the student's perception). The latter undoubtedly reflects the fact that this teacher endeavoured to individualise the work for each student.

THE TEACHER

The class teacher has a relaxed, friendly manner with all the students, and demonstrates a clear personal interest in each child. Although her general manner is relaxed, her approach to instruction is very structured and students are taught new concepts either in small groups or, less often, as a whole class. Opportunities for guided practice are always given before independent practice and the pace of instruction is fairly fast. Once the more able students have demonstrated mastery of a new concept they are moved on to more challenging work, while less able students are given additional practice examples at a more basic level.

Within the streamed groups for reading and maths, children are placed in small ability groups and work is individualised when necessary. For example, two gifted children within the class teacher's upper reading stream are given independent work to do, while the two highest and two lowest ability students in her lower maths class also follow independent programs.

The teacher is well organised and efficient in all her classroom work. Materials are always ready in advance, and relatively little time is lost in teacher or student "transition" time. Nevertheless, the teacher always found time to speak individually and personally to students and to have a joke with them either individually or as a class as a whole.

THE CHILD

Rhonda is not an "integrated" student in the sense of having spent some time in a segregated environment. She has attended her present school since second grade. Her behavioural problems emerged over time, but came to a point in fifth grade when the staff as a whole and her teacher were, in the principal's words, "at their wits end" to know what to do with her. She would follow no teacher directions, was on-task very little of the time (especially in maths) and avoided work as often as she could, especially any tasks that might lead to failure. She was also a very unsettling influence on the class and in constant trouble with staff and other pupils in the playground. In her present teacher's words, "It was felt by all involved that Rhonda needed a positive, supportive, stimulating classroom and extra help in her weaker academic areas".

PEER ACCEPTANCE

Rhonda's playground behaviour has been slower to improve, and this is thought to be partly attributable to her close association with another pupil (from her previous class) whose behaviour has also tended to be irresponsible and unsatisfactory. This situation had improved by the time of observation, and Rhonda was observed playing appropriately with a number of other peers in the playground observations. Although in the bottom 20% of the class in terms of peer acceptance, Rhonda's teacher reported that acceptance by her peers had improved over the year. She is, for example more often chosen to participate in small group activities within the classroom than was the case earlier in the year.

PARENTAL ATTITUDES

Rhonda comes from a one-parent family; her younger brother attends the same school. Her mother was initially very anxious about her academic and behavioural problems and tended to blame the school. The school, on the other hand, felt that her mother's very high expectations for Rhonda, when contrasted with her poor academic performance, were at least partly to blame for Rhonda's poor self esteem and behavioural problems. At the time of observation her mother was very pleased with the improvement in Rhonda's school performance and behaviour and felt that the school staff had been helpful in achieving this.

USE OF RESOURCES

Rhonda was thus referred for assessment and observation by the DGO and the ITBD. The latter also requested a full academic assessment by the resource teacher so that Rhonda's main areas of academic weakness could be identified and targeted for assistance. Based on this assessment and discussions with all concerned, Rhonda was placed in a different class - a composite 5/6 - with her present teacher. The ITBD designed a behavioural program for Rhonda and this was implemented in the classroom by the teacher under the supervision of the ITBD. A program to improve her behaviour in the playground was also implemented with the cooperation of most other staff members. The resource teacher implemented an intensive remediation program in basic maths concepts (on a withdrawal basis) and her class teacher gave her additional support and assistance in the classroom.

Rhonda responded very well to the behaviour modification program in the classroom. This was maintained, with an increasing emphasis on self-monitoring, for the first three terms of 1987, but was phased out completely (partly at the student's own request) at the beginning of fourth term. During the observation period which took place in the second and third weeks of that term, Rhonda was not on any special program and appeared to be managing very well. Her on-task behaviour during that period was on a par with the rest of the class (which was above average for our sample of classes). Thus one of her major problems in class had clearly been overcome. She has also "caught up" academically and is now functioning comfortably within the lowest stream of maths and reading. She follows teacher directions well and interacts appropriately with both teachers and her peers. Although her on-task behaviour is not as good with other teachers (such as the other 6th grade teacher and the relief teacher) her behaviour is now quite acceptable. This represents a big improvement on last year when her teacher felt that she could not trust Rhonda with any teacher but herself.

CONCLUSION

Rhonda appears to be making good progress in her present class, without the necessity (at present) of any additional outside support. The provision of appropriate programming support last year, and Rhonda's placement in the class of a warm, supportive and efficient teacher, appear to have largely overcome her behaviour problems. Her self control, self-esteem and relationship with her peers have all improved and everyone feels that she should continue on to regular high school next year. The ITBD reported that she would be available for consultation there should Rhonda's behaviour regress with the change in school environment.