INTRODUCTION
The issues of inclusion and least restrictive educational environments have concerned and continue to challenge deaf students, their families, educational administrators and teachers of the deaf. For example, a 1963 Ministry of Education report (London) castigated educators for the innovative but unsupported integration of hearing impaired students (Dale, 1984). Further comment from the United States regarding the later Public Law 94-142 (Education for All Handicapped Children's Act, 1975) suggested that the primary goal in special education and integration is to develop 'economically self-sufficient adults' (Ross, 1982). This goal at least moved the debate beyond defining mainstreaming as the location of a hearing impaired student's education to include how well the student adapts and learns. The 1976 Education Act in the UK heralded the inclusion of all handicapped children in ordinary schools (Dale, 1984) but in 1977, Mark Ross voiced his concerns for deaf students engaged in mainstreaming efforts. At that time, he appeared to advocate mainstreaming for hard-of-hearing students, but not for the hearing impaired or deaf and commented that the picture of inclusion was not a 'pretty' one.

By 1984, Owrid (cited in Dale, 1984) stated that integration of hearing-impaired students was an 'idea whose time had come'. The need for definition and description of workable models of partial or total integration was noted and continues to challenge educators and administrators. The historic commonalities amongst the various models reviewed include appropriate specialist support, parental involvement, hearing aid devices, in-service for mainstream teachers and average or better academic ability. These factors have been mentioned in some but not all of the reviewed international attempts at academic and social integration of hearing-impaired students (Boothroyd-Turner, 1990, Bowdin, 1988, Brill, 1978, Dale, 1984,
Davis, 1990, Gjerdingen & Manning, 1991, Leigh & Stinson, 1991, Ross, 1982, Walker, 1993). A model of integration in New York (Lexington) in 1961 noted the 'poor results' of the deaf integrated students, with fewer than 35% receiving extra help. By 1968, much better results were noted along with significantly raised specialist assistance (Dale, 1984). In 1978, Brill conducted a study of twelve models of integration in the United States. At this time, only 23% of integrated deaf students received Teacher of the Deaf assistance. The remainder of the students (77%) located in mainstream schools were placed in resource classes or special units.

Today, suitable mainstreaming continues to revolve around parental choice, appropriate placement and support. Parents and educators must remain flexible and sensitive to the emotional, social and academic abilities and needs of the hearing impaired student. Studies involving large numbers of integrated hearing impaired students suggest that they are experiencing higher levels of academic success than hearing impaired students who are not mainstreamed (Allen & Osborn, 1984). The 1987 Commission on the Education of the Deaf developed suggestions to guide integration. Communicative and linguistic needs, hearing status, social, cultural and emotional needs, individual motivation and placement preference, individual academic level and learning style and family support were identified as important factors (Ross, 1990). According to Boothroyd-Turner (1990), once a student is mainstreamed, success may be influenced strongly by the support style and timing tailored to the individual student, by continued consultation with parents, by tutorial support which allows the student to go beyond coping to excelling, by wise use of assistive devices and by the motivation, desires and wishes of the student.

Programs such as the Yarra Valley Anglican School in Victoria, Australia, the Clarke School in the United States and the public school system in Toronto, Ontario, Canada present different but apparently successful models of inclusive education for hearing impaired students. The Yarra Valley model functions as a unit in a mainstream setting. The students are mainstreamed with support and the emphasis is on a "high standard of achievement" (Walker, 1993). The Clarke School, an independent, private facility, has been involved in mainstreaming for over a century. Issues of the implications of a hearing loss, the amount and pace of work in an integrated setting, rapid classroom discussions and the support required in such situations and social isolation are all concerns which Clarke staff address with continuous preparation of students, families and integrating schools. These three key elements are all involved
in an ongoing, appropriate support system which may involve
direct intervention, monitoring and trouble shooting (Gjerdingen & Manning, 1991). The public school system in Toronto, Ontario
offers a model of mainstreaming similar in location and timing
to that offered at St Gabriels in Sydney, New South Wales,
Australia, described in detail below. In Toronto, the hearing
impaired students are educated in morning sessions in
integration support units. In the afternoon sessions, the
students attend local schools and are supported in these
settings. The Toronto program is aimed at students who cannot
cope with full integration (Boothroyd-Turner, 1990).

The Royal New South Wales Institute for Deaf and Blind Children
offers The Garfield Barwick School and the Itinerant Teacher
Support Service as mainstream opportunities for hearing impaired
students. St Gabriels School for Hearing Impaired Children,
operated by the Christian Brothers, is another model of
integration in New South Wales, Australia.

THE GARFIELD BARWICK SCHOOL MODEL OF INTEGRATION
Situated in North Parramatta, NSW, the Garfield Barwick School
is owned and administered by the Royal NSW Institute for Deaf
and Blind Children. The school caters for deaf students with a
significant loss (60 dB or greater in the better ear) or for
those deaf students who will benefit from its aural-oral
program. Families who elect to place their children in the
Garfield Barwick School program do so with the understanding
that partial integration will occur and that the levels of
integration will be based upon the individual needs and
abilities of each student.

There are three mainstays of the program: partial supported
integration into nearby mainstream schools, parent participation
and specialist instruction at the Garfield Barwick School.
There are distinct advantages derived from a close and
cooperative relationship between the three features of this
program. Integration is highly flexible. Students are
integrated into academic content areas in which there is an
opportunity to learn and succeed. All students who attend the
Garfield Barwick School are integrated for at least one complete
academic subject. The levels of integration range from
approximately 35% to 95%, depending upon the needs and abilities
of the individual learner. When integrated, there is extensive
in-class support which takes the forms of small group work or
team teaching when the student is supported by a specialist
teacher. Integration aides support the students also, making
sure that the student has access to the main points of the
lesson. Levels of support range between 20% to 70% of class
time. In all cases where support is provided, notes are taken by staff from the Garfield Barwick School. Copies of these notes are given to the mainstream teacher and provide content information for the specialist teacher. Parents have access to these notes also. Carefully monitored and highly flexible individual timetabling allows for deaf students to take part in the culture of the hearing majority and to learn appropriate social behaviour. In addition, they may be seen alongside their hearing peers as being capable academically.

In terms of integration, parents who are able attend weekly working sessions with their child and the Garfield Barwick School teacher. During this session, curricular content and specific educational and social aims are demonstrated and discussed. Written reports are generated twice per term describing the student's special and mainstream learning and there is an annual student review which is attended by the mainstream teacher as well. Generally, a report from the mainstream teacher is given at this time. Parents have the opportunity to participate in the greater life of the Garfield Barwick School and the mainstream school, gaining strength and advice from other families.

The Garfield Barwick School teachers garner great insights when they support their students in a mainstream setting. The teachers use the age-appropriate content material from the mainstream setting to address the specific auditory learning needs, speech skills, receptive and expressive language abilities, reading comprehension and written expression of their individual students. Such instruction takes place generally at the Garfield Barwick School. With secondary students, specialist tuition may take place at the mainstream setting. The students travel between the two settings for access to mainstream curricula and for specialist intervention.

The Garfield Barwick School program of partial integration is complex. Organisational convolutions can lead to disadvantages as can the issues of supervision of student progress. Mainstream staffs may require frequent and repetitive inservicing about the deaf students in their care, from educational, social and audiological viewpoints. Management of assistive equipment such as FM systems may be complicated by the building designs of the integrated setting. Naturally, the need for ongoing, clear communication of goals and diplomatic but consistent care of confounding situations must be met. Sudden timetable alterations or undue challenges faced by a deaf student in a particular classroom or with a particular teacher are examples of such situations. Such persistent requirements
and requests can become wearing and onerous to busy and dedicated staff at both sites.

The complicated, individual integration timetabling which may be reactive or responsive on a daily basis can take an inordinate amount of time to organise and record. Recently, the decision was made not to ask staff to assume the integration support of absent colleagues with the exception of student transport to and from the mainstream settings. The effort and time involved in weaving together the varied integration timetables from five-day, seven-day and ten-day cycles is daunting. There is instruction time lost because of the movements between the Garfield Barwick School and the mainstream setting. None of the participating mainstream schools are at a great distance, but several require transportation by car, resulting in ten minute trips. Many of the students walk to and from their integrating schools. If they are young or immature, they require adult supervision as a busy, urban street may separate the two sites.

Teachers, especially inexperienced practitioners, find enormous challenge in merging mainstream age-appropriate content material with the special needs of their students. Supervision and suggestions in this area and in the area of note-taking can be fraught with difficulties. Supervision of integration aides can prove time-consuming also, but is necessary to maintain high quality support.

The program in its present state is costly in human and financial resources. Care must be taken by way of ongoing observation and assessment that this aural-oral program is meeting the needs of the students. When it is felt by teachers and parents that a different setting or communication method may be more appropriate, reasoned advice must be provided. The Garfield Barwick School staff appears confident that this program of partial, supported integration offers one of the best opportunities for deaf students to gain access to age-appropriate content material and to the larger hearing culture. They also feel that for most of the students who have attended this school, it has been the least restrictive, most beneficial educational option.

THE ST GABRIEL'S SCHOOL MODEL OF INTEGRATION
At present, students attending St Gabriel's School travel from all parts of the greater Sydney area by Commonwealth government funded taxis. School commences at 8:30 and concludes at 12:00 noon. The students are then transported by the same taxis to their afternoon school - schools in the local areas where they live. The students arrive at their afternoon schools at varying times but in general, before or during lunch. The main aim of integration is social interaction. The intention is for the
students to join in and function as a member of the class, to participate in class activities and to communicate with their peers - the goal being language development. In most cases, the level of linguistic ability is below that of their peers; however, in a positive and secure environment, it is the opportunity for meaningful and contextual language learning that is valuable. St Gabriel's teachers visit the afternoon schools approximately three times a term. The purpose of these visits is to support the teacher of the integrating school and also the student giving advice on equipment, teaching techniques and expectations.

Many of the advantages identified by the teachers of St Gabriel's are centred round those benefits gained by hearing impaired students through interaction and socialisation with hearing students in regular schools. It is a valuable opportunity for these pupils to develop independent and functional language skills in a situation where the students must assume some responsibility. The students benefit from the opportunity to generalise the language learning that takes place in the mornings at St Gabriel's. They enjoy a sense of belonging when self esteem is often a concern, taking part in school and community events such as camps, sports carnivals, excursions and fetes.

Teachers from both schools can work together, exchange information and ideas and collaborate to create the best possible learning environment for the student. Quite often there is a degree of trepidation for the teacher who has not had a pupil with a hearing impairment in his/her classroom before. Much of this can be alleviated through school visits and the sharing of techniques and strategies. Visiting students in their afternoon schools also gives the teacher from St Gabriel's an indication of what the constant goal is when full integration is the achievable task. St Gabriel's teachers are often involved in educating hearing students about hearing impairment. This involves talking to students about what deafness is, how hearing aids and FMs work and what they as individuals can do to contribute to the child's continuing language development.

The rationale for integrating these students is to provide them with alternatives and choices. They attend St Gabriel's in the morning to receive the individual attention and input they require, but they are also part of the local school that they otherwise (had it not been for their impairment), would have attended full time. Because of the arrangement St Gabriel's has with the integrating schools, the students who integrate are not on their rolls. St Gabriel's students are visitors and it is St
Gabriel's who takes legal responsibility for their academic education. Much depends upon how principals and teachers perceive this information, for it will directly influence the classroom climate. The situation must be a shared one. Problems may arise from a lack of understanding and clarity of the situation, so time must be spent helping the teacher to become aware of the student's needs and making the students aware of what will and will not help the pupil with the impairment. In cases where there is minimal talk aimed at the student, it can reinforce non-verbalisation.

The program is disadvantaged by the limited amount of liaison time with the afternoon teacher. This can be a problem when the student is having difficulties integrating. The students integrate in the afternoon, which means they often miss out on the intensive learning that takes place in the mornings; therefore, their exposure to the Key Learning Areas, and subsequently their academic development can be limited. However, it is already limited because the students do not have enough language to understand the content unless the language is very greatly modified. Students with enough language are integrated. Conversely, because these students are integrating in the afternoon, they are only attending St Gabriel's for half a day. This restricts the teachers at St Gabriel's greatly in providing for their special needs. In effect, the student is caught between worlds and they may lose out academically which can be detrimental to the child's self esteem and confidence, regardless of how intelligent they may be. St Gabriel's has its own curriculum and the students consequently receive limited input through Key Learning Areas in primary school. High school age students with careful liaison and a leaflet program are able to meet all Key Learning Area requirements and achieve a School Certificate.

The integration program requires significant outlay of resources (time, money and transport). The students are forced to waste large amounts of time through travelling. Social relationships which are sometimes difficult to develop and nurture are at the mercy of changes of classroom at the end of the year and occasionally, the amount of play at lunch is restricted by travelling. There is also the problem of classroom work encountered on arrival or continued from the morning. This can be confusing and difficult to join.

St Gabriel's integration program provides much for the students who are part of it. There are many difficulties that constantly arise. The main disadvantage St Gabriel's experiences is one of control and the lack of it over the integrating school.
environment.
The role of the St Gabriel's teacher is therefore very important in establishing and maintaining an ideal situation where any disadvantages are outweighed by the benefits. That is, to be supportive and effective in a way that encourages the teacher and classmates to include the student with the hearing impairment as much as possible. This ideal situation is very achievable. In this scenario where the circumstances are positive, the program is of great value, reaping the rewards with rich language, social benefits and ongoing educational opportunities which these students may otherwise not attain.

THE ITINERANT TEACHER SUPPORT MODEL OF INTEGRATION
As another example of support models, The Royal NSW Institute for Deaf and Blind Children offers itinerant teacher assistance to hearing impaired students who attend non-systemic independent schools in the greater Sydney area through its Itinerant Teacher Support Service (Hearing). Begun in 1991 with one teacher, this service has burgeoned to seven teachers in 1995. The styles of itinerant support and the allocated times vary considerably among the students, depending upon student needs and choice. An academically independent student and teacher may work together during a lunch period or before or after school for one period or more per week. Additional time may be spent providing less obvious forms of support such as liaising with the mainstream staff, checking auditory assistive devices, advising on grant applications or providing interpreting for examinations when required. A less independent student may receive five hours or more per week of specialist support. This assistance may take the forms of notetaking, team-teaching, small group work or withdrawal for one-on-one tuition.

Itinerant teachers maintain regular professional communication with mainstream administration and teachers in a variety of ways in addition to direct contact. A report detailing past activities and future goals is prepared each term. The annual student review is an opportunity for all parties to discuss the past year's progress and the future year's long term goals. If the parents or teachers are concerned, a student review can be held more frequently. Naturally, parents receive copies of all written communication and are encouraged to discuss any concerns with the itinerant teacher. In some instances, mainstream teachers, itinerant teachers and parents meet outside school hours to discuss challenges and alleviate parental anxiety.

The low caseload of the specialist teachers (a maximum of six students) allows for travel time and means that students on the service receive significant levels of support. Although most of
the students who receive itinerant support are oral, the service is available to students who use manual forms of communication. At present there is one student with whom Auslan is used to augment and clarify spoken information. The itinerant teacher has taught the student's class as well as interested staff initial Auslan skills. In 1996, the school has nominated Auslan as one of its LOTE (Languages other than English) subjects.

In a program such as the Itinerant Teacher Support Service, hearing impaired students need to be independent or near-independent learners. Literacy skills may be remedial but should not lag too far behind the literacy skills of the mainstream class. Students need to be able to cope with the fast pace of mainstream lessons as well as such potentially confounding situations as group discussions, teachers who speak to the blackboard or excessively noisy classes. Although the itinerant teacher may provide inservice information routinely, the student may feel forgotten or ignored when the itinerant teacher is not at hand. At times, the itinerant teachers voice concerns that even with a low caseload, the level of support they can provide is not adequate to respond to the academic, social and emotional needs of the students. Furthermore, the distances and urban travel time between integrating schools affects the efficient use of teacher time.

Mainstreaming as described in the three models presented has resulted in considerable confusion and consternation as well as satisfaction and opportunity for hearing impaired students. As stated previously, inclusion, going beyond the locational aspects of mainstreaming, is essential if deaf students are to gain access to the social, academic and communication of their hearing peers. If integration is an idea whose time has come, educators must continue to monitor and improve the existing mainstreaming models so that the mainstream setting is, in reality, the least restrictive educational environment for hearing impaired students.


Bowdin, M. (1988). Think tank discussion program: A small group alternative to class discussion to promote interaction among
eight students, including one profoundly hearing impaired. The Volta Review, 90 (6), 295-299.


