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Regular teachers' attitudes to the need for additional classroom support for integrated students with intellectual disabilities

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**Regular teachers' attitudes to the need for additional classroom
support for integrated students with intellectual disabilities**

by

Rory Mc Nally, B.A., B.Ed., H.Dip. Ed.

A 4-Unit thesis submitted in partial fulfillment of the
requirements for the award of Master of Education

Supervisors: Professor Peter Cole

Dr. Russell Waugh

May 2000

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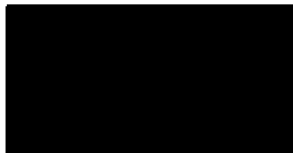
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Abstract

The purpose of this study was to examine regular classroom teachers' attitudes to additional classroom support, both physical and personnel, for students with mild and severe intellectual disabilities who may be integrated into regular classrooms. The concerns of the regular classroom teachers with regard to the successful inclusion of students with intellectual disabilities are certainly merit addressing. As the regular classroom teachers are largely responsible for the education of these integrated students, it is worthwhile to examine their perceived support levels in relation to integrated students with intellectual disabilities. It is anticipated that the results of this study will prove useful when decisions are being made by educational administrators about the level and type of support needed for integrated students with intellectual disabilities. The results should be beneficial as a guideline for those concerned with the appropriate allocation of funding for students with intellectual disabilities who are educated in regular classrooms. As the subjects of this study were Catholic teachers employed in Catholic primary schools in Perth, Western Australia, it is anticipated that the results of this study will prove useful to the administrators in the Catholic Education Office of Western Australia.

The dependent variables were physical and personnel support. The independent variables were ability, effort and school. Seventy-two classroom teachers from six East –Metropolitan Catholic Primary Schools in

Perth, Western Australia, were used as participants. These teachers were presented with a vignette describing a hypothetical male student. Ability (average, mild, severe) and effort (low, moderate, high) were systematically varied to create a nine-cell design. Vignettes were randomly assigned to the 72 teachers. The teachers were asked to respond to two measurements for the dependent variables. The first comprised a seven-point Likert scale measuring their perceived need for additional physical support and additional personnel support in the regular classroom. The second was a magnitude-scaling instrument, which also required responses on additional physical and personnel support. A multivariate analysis was completed for the seven-point scale and magnitude scaling of the dependent variables. Wilk's criterion indicated no significant multivariate interaction between the factors of ability and effort. The multivariate analysis yielded a main effect for ability for both dependent variables.

Univariate analyses showed that teachers perceived a significant difference between students with and without intellectual disabilities in the levels of additional personnel support needed but no significant difference between students with mild and severe intellectual disabilities in the levels of additional physical support. The ability level of the students was the critical variable that determined the levels of additional support, as perceived necessary by the regular classroom teacher. Regular classroom teachers did not perceive the factor, effort, as being significant. Consistent with attributional research findings, they did not perceive student effort as needing additional classroom support. Teachers perceive a strong need for

personnel classroom support being necessary for students with mild and severe intellectual disabilities.

There is a paucity of global research specific to the expected levels of additional physical and personnel classroom support needed for students with intellectual disabilities and none in Australia. This study has implications for the allocation of resources within schools in that it may offer guidelines for determining the levels and type of support given to regular classroom teachers so that integrated students with intellectual disabilities may succeed in the regular class.

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Chapter 1

INTRODUCTION

Background

There has long been an awareness among educators that students with intellectual disabilities can be successfully educated in mainstream classes. This push for the inclusion of these children into regular schools, which began some 40 years ago, has brought with it many concerns for regular classroom teachers. How do regular classroom teachers view the whole inclusion movement? It must be difficult for regular classroom teachers who disagree with the concept of inclusion to successfully include students with intellectual disabilities into their class. What additional support is necessary and available to the regular classroom teacher so that integrated students with intellectual disabilities can be successfully educated? Do regular classroom teachers see a difference between levels of ability? Is the level of effort expended by the student an important factor in determining the expectations of the classroom teacher in regard to student performance?

Inclusion

The term inclusion means that a student with disabilities may be partially or fully included in the regular classroom, dependent upon the severity and number of disabilities and the level of additional support available for that student (Fuchs & Fuchs, 1994). In this study, inclusion does not mean full inclusion, where the inclusive school educates all

students in the mainstream, as advocated by Stainback and Stainback (1992). Proponents of this type of inclusion claim that the placement of students with disabilities, irrespective of the number or severity of the disability, in any educational setting other than the regular classroom, puts these children at risk of an inferior education and deprives them of social relationships. In this study, inclusion does not mean “...the *full* inclusion of *all* persons with disabilities in *all* aspects of societal life” (Lipsky & Gartner, 1991. p.52. italics in original).

How much time does a student with disabilities have to spend in the regular classroom in order for inclusion to take place? There has been a great deal of debate on this topic and Brown, Schwarz, Udvari-Solner, Kampschoor, Jolenson, Jorgenson and Greenwald, (1991) state that the student with disabilities need not spend all of his or her time in the regular class, but that that regular class should be viewed by all teachers and students as the class to which this student belongs. They also claim that “It is better to be an ‘insider’ who goes out for short periods of time, than it is to be an ‘outsider’ who comes in,” (p. 40).

Evans (1994) claims that it is not enough to decree that all students with disabilities be placed in the regular classroom. If inclusion is to work, there must be a wide variety of personnel to support the regular classroom teacher to provide a healthy educational environment for all students.

The inclusion movement started in the early ‘sixties’ under the name ‘mainstreaming’, changing its name to ‘integration’ in the late ‘seventies’. The current trends of partial and full inclusion affect and reflect regular teachers’ attitudes to inclusion (Fuchs & Fuchs, 1994; Stainback &

Stainback, 1992). The rights of students with disabilities in the United States and England to as normal an education as possible are enshrined in Law (Public Law 94-142 and the 1981 Education Act respectively). In Australia there is a growing awareness of the needs and acknowledgements of the rights of people with disabilities (Center & Ward, 1987). Principles of normalisation, the inclusion of students with disabilities into the regular classroom and the practice of individualized education programmes are now commonplace within the Australian educational system. Normalisation is the creation of as normal as possible a learning and social environment for the student with disabilities (Kirk, Gallagher & Anastasiow, 1997). While many educators would like to entrench such policies in a legal mantle, successive governments have managed to side step the issue, preferring to pay lip service to such philosophies.

With the impact of behavioural technology in the U.S and the immense progress towards the principles of normalization in Scandinavia (which emphasized the need for support structures in education and within the local community), it was no longer possible to exclude the severely handicapped from being educated. In 1971, the Senate Standing Committee in Australia recommended that the educational needs of disabled students and the training of teachers to meet these needs be shouldered by the Commonwealth Government. In 1972, the Interim Committee for the Australian Schools Commission was established and it recommended that grants be made available to train teachers to meet the needs of the handicapped and that finance be given to one university in each state to establish diagnostic and research facilities in the area of special education.

Research in Australia suggests that regular classroom teachers generally hold less favourable attitudes towards inclusion than do administrators and other professional staff (Center & Ward, 1987). However, the gap between teachers' attitudes and those in administrative positions is closing (Harvey, 1992). Inclusion has long been a controversial topic here and, little wonder, as we are so often swayed by the winds of change blown by American and European academia. A recent study in America, involving over 7000 regular classroom teachers, found that 65% of regular teachers supported the concept of inclusion, 54% were willing to include students with disabilities in their own regular class and 55% of regular teachers felt that inclusion provided benefits to the student with disabilities (Scruggs & Mastropieri, 1996). While the educational rights of students with disabilities have been legislated for in some other countries (such as UK and USA), it seems that the concerns of the personnel most responsible for the practice of such rights (classroom teachers) have yet to be addressed.

Support

Regular classroom teachers are educational personnel who are appropriately qualified and experienced, are currently employed as schoolteachers by the school authorities to teach regular school grades in regular classrooms. The regular classroom teacher has considerable responsibility for the success of a student with an intellectual disability enrolled in a regular class (Garvar-Pinhas & Schmelkin, 1989) and has many concerns about the inclusion of students with intellectual disabilities

into a regular class. These teachers often claim that they need additional support to help students with intellectual disabilities succeed in the regular classroom. These additional supports are over and above the supports that are normally available to the regular classroom teacher. Additional supports may comprise a time allocation for the regular teacher to plan for the inclusion of the special needs student, professional development of the regular teacher, personnel support, material resources, administrative support, class size and consideration of the severity of the disability (Scruggs & Mastropieri, 1996). A task force set up in 1994 to report on the education of students with disabilities and specific learning difficulties recommended an increase in resources for the provision of adequate services to meet the needs of students with disabilities (Education Department of Western Australia, 1994, Recommendation 61).

This study focuses on two types of additional classroom support for the regular teacher who has a student with an intellectual disability included in the regular class. Additional physical support refers any additional curriculum resources (textbooks, remediation and extension materials, enrichment programmes, computers and software), used to support specific students in the regular class. Additional personnel support refers to any additional personnel (specialist teachers, aides, paraprofessionals, volunteers,) who are employed to support students with disabilities included in the regular class.

Education institutions should be aware of the levels of support that they can offer so that appropriate placement of a student with disabilities can be matched. Center and Ward (1987) suggest a graduated model

whereby appropriate assessment of the child's school needs can be matched with the support levels offered by the school and the correct placement made.

Ability

An intellectual disability refers to a student's inability to learn because of substantial limitations in cognitive functioning. It is characterised by below average intellectual functioning and limitations in at least two of the following adaptive skills areas: communication, self-care, health, basic academics, leisure, employment, safety, home living and social skills. Intellectual disability was, up until 1992, classed as mild if the person's IQ was between 69 and 50 and severe if the person's IQ was between 40 and 20.

Kirk, Gallagher and Anastasiow (1997) point out that definitions of intellectual disabilities are not 'cast in concrete'. Factors such as cultural differences, the effect of community environments, the individual's relative strengths in particular domains and the improvement that can result from various supports must be taken into account. They define the three distinguishable levels of intellectual disability, mild, moderate and severe. Mild refers to mental development at between one-half and three-quarters of the normal rate; moderate, at one-half of the normal rate and severe as mental development as less than one-quarter of normal cognitive growth.

An understanding of these levels of ability would be very beneficial to the regular classroom teachers so that they can evaluate their expectations

of students with an intellectual disability and make more informed decisions on the levels of support necessary for these students to be fully integrated.

Focus of this study

This study investigated the perceived additional support levels for integrated students with intellectual difficulties, as identified by 72 regular classroom teachers, employed in six Catholic primary schools in the eastern metropolitan area of Perth. The independent variables comprised schools, ability and effort. The dependent variables were additional physical and personnel support. In this study, the ability variable was divided into three levels. These levels were classed as average intellectual ability, mild intellectual disability and severe intellectual disability. The effort variable was also divided into three levels; low, moderate and high. Effort refers to the level of input that a student expends in the areas of classwork, assignments and homework.

The selection of ability and effort in this study is based on attribution theory. Attribution theory focuses on when and how causal inferences are made. Heider (1958) paved the way for research into this domain believing that motivation, ability and situational factors combine to promote a certain action. Weiner (1979) extended Heider's work by identifying mood and effort as major factors that promote certain actions. The present study investigates whether effort and ability are major factors when regular classroom teachers are determining support levels for integrated students with an intellectual disability.

Research Questions

With regard to expected additional support levels (curriculum resources and personnel), do regular classroom teachers' attributions of students' effort differ for students with and without intellectual disabilities? Is effort a crucial factor when regular teachers make judgements on the level of support necessary for particular students?

Is there a perceived difference for teachers in the expected levels of additional support for students with mild and severe intellectual disabilities? With regard to ability, do regular classroom teachers see a greater need for additional support for students with severe disabilities as opposed to students with moderate disabilities?

Is there a difference in additional physical and personnel support among the levels of ability? It was considered that there would be no difference among the schools and therefore no research questions were developed on this factor.

Structure of the thesis

This four-unit thesis is divided into five chapters. Chapter one provides an introduction to the study. It briefly describes factors that may influence regular classroom teachers' perceptions of the inclusion of students with intellectual disabilities into the regular classroom.

Chapter two presents a literature review and looks at the research on global perceptions of inclusion in Europe, America, Asia and Australia,

focusing on concerns for adequate support for the inclusion of students with intellectual disabilities. It gives a succinct history of attributional theory and its relevance to this study, before examining the research on regular teachers' attitudes to additional support for integrated students with intellectual disabilities.

Chapter three describes the methodology used in the study. It describes the measurement tools used, which comprised responses to a vignette by way of a seven-point scaled questionnaire and magnitude scaling. The chapter then describes the subjects in the study, the procedure by which the data were collected and the nine-cell design of the study. Chapter three ends by describing the hypotheses developed for the study.

Chapter four describes the results of the study. It explains why the data were examined for outliers. It describes how the data were analysed using multivariate procedures and why the schools factor was not included in subsequent univariate analyses. Tables and charts depict these results, which are interpreted and explained.

Chapter five summarises this study, discusses the implications of this study for research, educational administrators, classroom teachers and schools. The results are compared to the findings of similar research.

Chapter 2

LITERATURE REVIEW

This chapter is divided into five sections – search procedure, global perceptions and models of inclusion, theories of regular teachers' attitudes to additional support for students with intellectual disabilities, attribution theory and the conclusion. In the global perceptions of inclusion, the current status of inclusion in a number of selected countries across four continents will be examined and commented upon. Attribution theory is then examined in relation to this study. This will be followed by a detailed analysis of the research on regular classroom teachers' attitudes towards additional support for integrated students with intellectual disabilities. A summary and comments form the conclusion.

As this present study was conducted in Catholic schools only, it is necessary to highlight the way in which children with disabilities are treated in the Catholic system as opposed to Government schools. As in the public system, selected Catholic schools have an on-site special education unit. These special education units cater for the educational needs of students with mild to moderate intellectual disabilities. There are no Catholic schools that cater for the needs of students with severe intellectual disabilities. The students who receive support in Catholic special education units are initially enrolled in their appropriate regular class. The special education unit is run by an appropriately qualified teacher. Unlike the Government system of special education centres within regular primary schools, there are no separate administrative personnel to look after the running of the unit. The school principal assumes this responsibility. The students are funded by

Commonwealth grants and topped up by the school's budget. Special education policies in both Catholic and Government schools will be similar by 2004 as both bodies embrace the Curriculum Framework (Curriculum Council of Western Australia, 1998).

Global perceptions and models of inclusion

To demonstrate current global trends in mainstreaming students with disabilities, the researcher will provide a succinct précis of movements in Europe, Asia, America and Australia. Mainstreaming (and more recently inclusion) is identified as the integration of students with disabilities into regular education classes in order to accommodate the requirements of 'least restrictive environment' as legislated by the Education for All Handicapped Children Act of 1975 in the USA.

Europe has responded in a very positive fashion to the notion of equality of education for all students with disabilities as outlined in the American Education for All Handicapped Children Act of 1975 (Public Law 94-142). While a lot of European countries don't have the rights of students with disabilities enshrined in law, the majority of countries acknowledge these rights in various education policies. The following data on Europe were compiled by the European Agency for Development in Special Needs Education and made available on the worldwide web. In the U.K., under the terms of the Education Act of 1996, school authorities have a duty to place children with special educational needs in mainstream schools with their peers wherever possible. School authorities must ensure that the child receives the appropriate level of support in order for successful integration

to take place. All students are entitled to have their educational needs identified and to receive the National Curriculum (Education Reform Act 1988). The Code of Practice 1994 states that pupils should be involved in decision-making about their learning, including target setting, *support levels*, evaluation and reviews. These legislative changes are the direct result of the 1970 Education (Handicapped Children) Act and the Warnock Report (1978). Along with the American 1975 Public Law 94-142, these laws paved the way and defined the direction of schooling for students with disabilities in the mainstream school system.

In Portugal, the Comprehensive Law of 1986, Decree 319 of 1991 and the recent legislation of July 1997, recognise the right of equal opportunities for pupils with special needs to integration into local mainstream schools. As a result these students have the right to the adaptation of their educational environment as well as to the educational process as well. These adaptations may focus on changes to or provision of the physical environment, materials, special equipment and technical aids. The Portaria 1102/97 established the means for mainstream participation and support, Section 105/97 reinforcing the conditions for integration allocating support teachers to mainstream schools. There is a very clear tendency to support inclusion and to continue to improve conditions as confirmed by decreasing numbers attending special institutions and a steady increase in the numbers of students with disabilities attending mainstream schools.

The absence of comprehensive special education legislation in Ireland has resulted in a number of alterations to the Constitution being

developed to cater for the rights of the student with disabilities. The Report of Special Education Review (1993) recommend that: “appropriate education for all children with special educational needs should be provided in ordinary schools, except where individual circumstances make this impracticable.” The Review Committee proposed a continuum of education provision to meet a continuum of special educational needs. Interestingly they propose a similar model to that used in some Australian states, the Irish version dealing with a wider spectrum of educational institutions. The recent drafting of the Education Bill in Ireland (1997) makes provision for any child with special educational needs. Current Government policy is to encourage the maximum possible level of inclusion of children with special needs into mainstream schools and to put into place the necessary supports to facilitate this development. It is envisaged that this support would take the form of remedial, resource and itinerant teachers.

The UN Convention on the Rights of the Child (1989) is now ratified by 177 countries worldwide. Among other concerns, Article 23 states the right of children with disabilities to special care and education opportunities, designed in a manner conducive to the child achieving ‘the fullest possible social integration and individual development.’ The UNESCO Salamanca Statement (1994) is a report from the UN’s education agency calling on the international community to endorse the approach of inclusive schools by implementing practical and strategic changes. In June 1994, representatives of 92 governments and 25 international organisations formed the World Conference on Special Needs Education. They developed a dynamic new Statement on the education of all disabled children, which

called for inclusion to be the norm. They adopted a new Framework for Action, the underlying principle being that ordinary schools should accommodate all children, regardless of their physical, intellectual, social, emotional, linguistic or other disabilities. The Statement continues:

‘Regular schools with this inclusive orientation are the most effective means of combating discriminatory attitudes, creating welcoming communities, building an inclusive society and achieving education for all.’ (UNESCO Salamanca Statement. 1994)

It asks the UN to improve their networking for more efficient support to integrated special needs children and calls on countries to establish inclusive-not special-schools. The Centre for Studies on Inclusive Education (1994) issued a report on special education needs in the Asia region. The report, based on 15 country case studies, argues that children with disabilities can be integrated into the regular educational system more successfully and at a cheaper cost than being placed in a segregated setting. It goes on to state that Asian countries are becoming aware of the value of inclusion, both to the pupil and the community. A lot of countries have begun to address improvements regarding the quality of education, which the participation of children with disabilities requires.

One of the poorest countries in the world, Nepal, has set a goal to integrate students with mild to severe impairments in mainstream primary education. The target is to make special education an integral part of basic primary education. Since 1985, the Nepal Association for the Welfare of the Blind has set up 21 schools, 20 of which are attached to regular schools.

In India, the Five Year Plan (1991-96) has increased the budget for children with impairments by more than five times. India supports a major national development programme on the integration of such children into regular schools.

The Philippine government has defined the ultimate goal of special education to be the integration of learners with special needs into the regular school system and eventually into the community (Section 5, Article 1 of Policies and Guidelines for Special Education).

Sri Lanka, despite its troubled past, was an early pioneer of mainstreaming. It regards the integration of children with and without impairment as one of the most important contributions to community living. Regular teachers in Sri Lanka receive a lot of in-class support from volunteer parents. Korea, Malaysia, Sri Lanka, China, Nepal, Indonesia and Thailand are among the Asian countries to have introduced Individual Learning Programmes in classrooms, which include special needs children. Special classes affiliated to regular schools enrolled 2,651 children in 1990 In China. In Nanjing province in 1993, in-service teacher training began to provide support for children with mild learning difficulties.

Such definitive changes in legislation, educational policy and practice with regard to the integration of children with disabilities have swept across Europe and Asia in the past decade. Legislation has prompted schools in the U.S. to reassess their funding procedures for students with disabilities. With the legal sword of this law hanging over their heads, much more funds have been made available to support students with disabilities in their least restrictive environment.

In 1994, the U.S. Department of Education identified 4.3 million students as having a specific learning disability. Many of these students are placed in regular classrooms for most of their instructional day. It is generally agreed that empirical evidence supports the notion of inclusion as identified from the early sixties by researchers such as Johnson (1962), Kern and Pfaffle (1962), Bacher (1964) and Diggs (1964).

School authorities in all Australian states have enunciated policies that propose that children with disabilities should be integrated wherever possible into regular schools and classes (de Lemos, 1994). The A.C.T. Schools Authority conducts two special schools for primary and junior secondary students who have moderate to severe intellectual handicaps or a developmental delay. Both schools conduct a variety of programmes affording pupils the opportunity to interact with non-disabled peers. This growing awareness of the needs for support for regular classroom teachers who have children with disabilities in their class is evidenced by the various Government funded reports into this area. The notion of equality among sections of the community was communicated in the report *A Fair Chance For All* (Department of Employment, Education and Training, 1990), the overall objective being "to ensure that Australians from all groups in society have the opportunity to participate successfully in higher education".

The Department of Employment, Education and Training (1990) study involved 18 institutions of higher education, selected because of their commitment to cater for the needs of the disadvantaged and people with disabilities. The Department of Employment, Education and Training (DEET) together with the Higher Education Council of the Board developed

a National Equity Higher Education Plan, identifying objectives for people with disabilities, which was to increase their participation in higher education, with a 12 month target of doubling the number of people with disabilities enrolled in third level institutions.

The Department of Employment, Education and Training (1990) study sought to identify good practice strategies for each disadvantaged area from the selected institutions. From these data, a composite model was to be developed and an appropriate funding model set up to underpin policy in relation to Equity funding for the educationally disadvantaged. The study confirmed that while Australia has been lauded for recognizing the rights and needs of people with disabilities, these rights are not enshrined in Australian law. The needs of such students appear so obvious while the resources dedicated to them are so small. This lack of resourcing and the absence of legal recognition of the rights of the disabled, places the status of services for students with disabilities under threat of any cost cutting exercise.

de Lemos (1994) has compiled the most comprehensive report on the status of students with disabilities in Australian schools. This report was based on a study of educational provision for students with disabilities carried out at the behest of the Australian Education Council and funded by the Commonwealth Department of Employment, Education and Training. The overall objective was to develop an understanding of the optimum way of providing school educational services to students with disabilities.

The study included a survey of schools to obtain data on what provisions are made for students with disabilities. It also included a

questionnaire to government and non-government educational authorities to determine policies and procedures in this area. I will examine these two areas in a bid to identify the level of support available to students with disabilities in the regular school and to compare the policy and practice in this area as this directly affects the perceptions of regular teachers' attitudes towards support.

Practices in special education at school level were identified from data collected by means of questionnaires to school principals, teachers and parents. The teacher responses numbered 680 at primary level and 419 at secondary level from a total of 369 schools (190 Government, 116 Catholic and 63 Independent schools). The sample was drawn from the various levels in all states. There was an over-sampling of Catholic and Independent schools in the target sample and, coupled with a very high response rate from this sector, this resulted in an over-representation in the achieved sample. This sample was then appropriately weighted.

The distribution of the sample representing the type of school attended was equivalent to the distribution of the national population of students with disabilities. Enrolment in primary schools was 45% in the population, 46% in the sample; for secondary schools 25% in the population, 26% in the sample; in special schools 27% in the population, 28% in the sample.

In primary schools, 32% of the sample group admitted that they did not have any special facilities for special needs students. 60% indicated that they had at least one of three types of special facility (ramps/modified toilet/specialist learning area), while only 8% had more than three special

facilities for such students. 60% also acknowledged that the building structure of the school caused mobility problems for students with disabilities.

Among the 117 sample primary schools, the average enrolment of students with disabilities in each school was 10. In the 107 secondary schools sampled, an average of 16 students with disabilities was enrolled in each school. Secondary schools had an extra 308 teacher and teacher aide staff in full-time employment terms for 1558 students with disabilities. In the primary schools sampled, only 45% of the additional staffing level were teachers, compared to 60% being teachers in the secondary school sample. Ten percent of the additional staffing in secondary schools comprised non-teachers specialists.

There was a big difference among school types in regard to the level of service they accessed from visiting specialists. Twenty five percent of the sample secondary schools had no special facilities for students with disabilities. Sixty six percent indicated that they had at least one of the previously mentioned types of facility, while a mere 7% listed more than three special facilities. Thirty six percent of the principals surveyed thought that their school's physical resources were adequate so as to successfully enroll and cater for the needs of students with disabilities (43% in primary schools). Again a high proportion (66%) of secondary schools have buildings not conducive to the ease of mobility for students with disabilities.

The population of Australian students who have an identified learning disability represents 2% of the student population (Ward, Center, Outhred & Pieterse, 1987). Of these 62,000 students, (accurate figures are

difficult to obtain due to inter-state differences on the definition of disability and the levels of pre-requisites necessary to access services), 27% were enrolled in special schools, 24% in special classes/units attached to primary and secondary schools and 49% were enrolled in regular primary and secondary schools. A constant challenge is to provide support for these students, especially the 49% in regular classes, who can so easily flounder. It becomes essential for educational bodies to adopt a model that ensures delivery of this support (Ward, Center, Outhred & Pieterse, 1987).

Attribution Theory

Heider (1958) examined the influence of attributions on feelings and behaviour and proposed that there was a link between people's expectations of others and their behaviour towards them. The selection and matching of ability and effort, the main independent variables used in this study, were based on attributional theory, in particular, the work of Weiner (1979) and Clarke (1997). Weiner (1979) put forward the theory that a person's motivation is determined by how well the person performed the same task in the past. The stability of this attribution, according to Weiner, determines one's expectations of future performance: "If one attains success...and...the conditions of causes of that outcome are perceived as remaining unchanged, then success...will be anticipated with a great degree of certainty" (Weiner, 1979, p. 9). Weiner considers that effort is considered internal but can be controlled. Ability is also internal but cannot be controlled. It is this stability (or lack thereof) of causes that determine the expectancy of future success (or failure). Individuals who attribute their performance to unstable

controllable causes, such as effort, tend to persist, in the belief that if they try harder, they will improve their performance. Conversely, if performance is attributed to a stable, uncontrollable cause, such as ability, they see little chance of changing their performance level in the future.

Clarke (1997) tested the validity of these attributional principles. She surveyed 97 classroom teachers. Each teacher was presented with a vignette of a hypothetical boy, indicating his level of ability and effort and whether he was intellectually disabled or not. There were four dependent measures. They were evaluative feedback, rating of anger, pity and expectations in regard to the boy. A 2 x 2 x 2 analysis of variance with repeated measures was conducted on each dependent variable. Results showed that the greatest rewards, the most pity and the least expectations were allocated to intellectually disabled students. This suggests that teachers see an intellectual disability as the single, uncontrollable cause of academic failure. Self-attributions carry over to the attributions of others (such as teachers) on individual performances (target students).

When an individual is seen as being in control of an outcome, the individual is viewed as responsible for performance. An outcome outside the control of the individual is seen as one for which the individual is not responsible (Weiner, 1986). When failure is ascribed to low ability, it is seen as resulting from a fixed characteristic, whereas failure due to lack of effort is under the individual's volitional control. Teachers' perceptions of the causal properties of their students' academic outcomes result in a number of emotional behaviours towards the students.

Weiner and Kula (1970) reported that students with low ability, who made no effort in class, received less punishment than students of high ability who made no effort. This supports the view that teachers perceive low ability as being the cause of failure as it is internal, stable and uncontrollable. Effort, while internal, is unstable and deemed to be controllable. Bar-Tal (1979) extended the Weiner model and applied it specifically to the classroom situation. The teachers' causal perceptions of student performance determine their behaviour towards the students. Like Weiner, Bar-Tal suggests that teachers base their expectations of student performance on the degree of stability and controllability of the causes. If success or failure of the student is a result of stable causes, a similar performance may be expected in the future. If performance is attributed to unstable but controllable causes, teachers might assume that a more successful performance can be achieved in the future. However, if performance is attributed to unstable and uncontrollable causes, teachers cannot predict future student performance. Research has supported the proposal that teachers' behaviour towards students is determined by their expectations regarding future student performance (Dusek, 1975; Braun, 1976 and Cooper, 1979).

Graham and Weiner (1986) confirmed a link between anger and pity and rewards and punishment. They found that the classroom teacher might feel anger towards a child who failed because of lack of effort, particularly if the child has high ability, yet feel pity for a child who has failed because of low ability. For the same low performance one child may be punished

less than the other because of the teacher attributing the cause of the failure to ability.

Graham (1990) researched teachers' perceptions of the principal causes of failure in the classroom and reported ability and effort as the two critical variables influencing the outcomes of student achievement. Effort and ability of students were established as being linked to a regular teacher's perception of their level of support (Graham, 1990). A similar design was employed in the present study.

Theories of regular classroom teachers' attitudes to additional support for students with intellectual disabilities.

Regular classroom teachers are most responsible for the success of the inclusion of students with disabilities into the regular classroom (Garvar-Pinhas & Schmelkin, 1985). This being the case, it is increasingly important to pay close attention to the concerns that general classroom teachers raise in relation to problems that they perceive as a result of having students with disabilities in their classes. However, a study carried out by Harasymiw and Horne (1976) found that although the classroom teacher bears the brunt of the responsibility for the success of the inclusion of students with disabilities, administrators are more likely to be asked about the factors identified as being critical for the success of such inclusion programmes. A considerable amount of research has been done on the attitudes of regular teachers to integration and Horne (1985) provided an extensive review of this literature, finding weighty evidence of negative attitudes to mainstreaming.

The body of research in this area highlights concerns such as handicap type, expertise, time and support levels as being concerns of regular teachers in regard to mainstreaming. General classroom teachers want to know what the most effective means of support are in order for children with disabilities to succeed in the regular classroom. They are concerned with the type, quality and regularity of support that best suits the needs of such students. Support for students with disabilities in the regular classroom can be of a physical or personal nature. Physical resources would include additional instructional material and resources, additional computer software and accessories and any other additional learning materials. Personnel support would comprise additional support staff (aides, paraprofessionals, volunteers). Adequate availability of support for students with disabilities goes some way towards assisting the general classroom teacher to effect beneficial instruction.

Larrivee and Cook (1979) reported a negative reaction towards inclusion yet here is growing evidence of a more positive attitude towards inclusion taking place among regular classroom teachers (Harvey, 1992). It would seem that the cycle is recurring as more recent studies seem to indicate a shift in support of regular teachers towards the concept of mainstreaming (Fulk & Hirth, 1994; Vaughn, Schumm, Jallad, Slucher & Saumell, 1996). It is impossible to review regular teachers' attitudes towards expected support levels for integrated students without being aware of these constant shifts and conflicts in a bid to evaluate the efficiency of inclusion. However concerns about the practicalities of inclusion still remain

only partially addressed, especially integrating children with more severe disabilities.

Teacher expertise, time constraints, support levels, type and level of disability are the major concerns of regular teachers in regard to inclusion (Center & Ward, 1987; Childs, 1981). General classroom teachers want to know what the most effective means of support are in order for children with disabilities to succeed in the regular classroom. They are concerned with the type, quality and regularity of support that best suits the needs of such students. Support for students with disabilities in the regular classroom can be of a physical or personnel nature. Physical resources would include additional instructional material and resources, additional computer software and accessories and any other additional learning materials. Personnel support would comprise additional support staff (aides, paraprofessionals, volunteers). Adequate availability of support for students with disabilities goes some way towards assisting the general classroom teacher to effect beneficial instruction (Center & Ward. 1987).

Much research has been done on the attitudes of classroom teachers to inclusion. However, there is a dearth of studies specifically examining levels of support needed to maintain the child with disabilities in a regular classroom (Coates, 1989, Larivee & Cook, 1979). The bulk of research on inclusion has been carried out through teacher surveys in an effort to identify the concerns teachers have regarding the inclusion of the child with disabilities in the regular classroom (Gans, 1987).

A research synthesis carried out by Scruggs and Mastropieri (1996) examined 28 leading studies of teachers' perceptions of

mainstreaming/integration .In this study, Scruggs and Mastropieri (1996) searched all relevant databases for articles describing teacher attitudes towards mainstreaming or inclusion. Additional information was gleaned from relevant books, literature reviews and reports. All major special education journals were also examined. Data were deemed relevant only if they dealt with teachers' attitudes towards teaching students with disabilities in the regular classroom and if the could be presented in a format in which "percent agree" to specific relevant items could be ascertained. Altogether, 28 reports published from 1958 to 1995 were identified. Respondents included 10,560 teachers from rural, urban, suburban or combined school districts in the Northeast, Southeast, Midwest and Western parts of the United States, New South Wales and Montreal. Mean years of teaching experience was 12.7 years. All surveys dealt with, among others, the issues of resources. For each item or cluster of items, an outcome of percent of respondents in agreement was derived.

A consistent finding of this study was that regular classroom teachers need support in teaching classes that include students with disabilities. These supports deemed necessary for the success of the students with disabilities included, time, training, personnel support, material resources, class size and consideration of the severity of disability. In ten of the surveys, conducted in nine states in the Northeast, Midwest, South and West of the United States, respondents were asked whether they had enough expertise and training to help a student with disabilities succeed in the regular classroom. Of the 2,900 respondents, 29.2% agreed that regular

classroom teachers could support a student with disabilities in their class as a result of adequate expertise and training.

In six of the surveys, questions related to the issue of adequacy of resources for integrated students with disabilities. These studies were conducted in the Midwest of the United States and New South Wales, Australia. There were 3,268 respondents in total. Many of these surveys distinguished between material and personnel resources. Of the respondents, 22.29% felt that they had adequate support (material and personnel) in order to support students with disabilities in the regular classroom.

In three investigations, 11% agreed that they had adequate personnel support for integrated students with disabilities, while 37.6% in two investigations agreed that they had adequate material support for integrated students with disabilities. Overall, teachers did not agree that sufficient resources were available for the successful integration of students with disabilities into the regular classroom.

Hudson, Graham and Warner (1979) surveyed 518 elementary teachers in Kansas about their attitude to inclusion. Thirty eight percent of the teachers felt that the materials they used for children with disabilities were inadequate. They noted that these additional materials were out of date, not instructionally useful and were often incomplete. Fifty eight percent reported that they felt they did not have the necessary support services available to them. By support services, teachers were referring to in-class support (aides, paraprofessionals, volunteers) and external consultative support (psychologists, therapist, resource teachers).

Larrivee and Cook (1979) devised an attitude scale to investigate the effect of classroom support variables on the attitudes of 941 regular classroom teachers toward the integration of special needs children. One of those variables was cited as "The availability of additional support services for accommodating special needs students, such as resource room, resource teacher, remedial reading teacher, counselling and appropriate instruction material (appendix, p322). The final teacher sample closely approximated the actual school population breakdown in New England. A Likert scale, reduced to 30 items after an item analysis, boasted a reliability rating of .92 (Spearman-Brown). Twenty five hundred questionnaires were mailed to 250 principals of the 250 randomly selected schools, providing a 54.4% return rate. Of the 7 variables surveyed – grade level, class size, school size, school type, success rate with special ed. students, level of administrative support and availability of additional support services – only three (success with special education. students, level of administrative support and availability of support services) had a significant impact on teachers' attitudes.

Success with special education students correlated highest with a positive teacher attitude to inclusion and with the level of support services available to the teacher (Larivee & Cooke, 1979). Findings would seem to indicate that teachers are willing to accept special needs students into their regular class if they can rely on the necessary support from other personnel and from adequate additional resources.

Childs (1981) surveyed 450 teachers from primary to high school who had integrated students with mild intellectual disabilities in their

regular classrooms. This study produced a negative attitude towards inclusion, as 50% of the teachers were unable to deliver quality instruction due to the absence of resource material and consultant services to teach these students.

Schultz (1982) used open-ended survey questions to find out the concerns of regular classroom teachers to educating children with disabilities. The responses were then categorised under the following headings: Time constraints, class size, training, resources and type of handicap. Of the 378 regular classroom teachers who responded, 99.5% cited the availability of additional instructional materials as being important.

Gallagher (1985) surveyed 466 regular classroom teachers in mid-west Missouri to elicit information about their perceptions of inclusion. Only 119 teachers (25.5%) confirmed that they were aware of available resources to facilitate mainstreaming efforts. Available resources were defined as appropriate instructional materials over and above that which is normally available to the regular classroom teacher. This would seem to indicate that the availability of additional resources was not communicated to the regular classroom teacher and that the classroom teacher had not asked the appropriate personnel about such materials resources. It raises concerns about the level of planning that went into supporting the students with disabilities in regular classrooms.

Gans (1987) mailed a questionnaire to regular classroom teachers requesting information on 99 demographic and attitudinal variables related to the integration of students with disabilities into the regular classroom. Gans based the content of the questions in his questionnaire on results from

a pilot questionnaire, interviews with school personnel and a review of the literature. He drew responses from 128 regular educators and 133 special educators in 21 school districts in Ohio and was able to investigate the importance of both types of variables and compare regular and special education teachers' responses. The attitudinal variables comprised four factors. The first factor dealt with teacher confidence in setting goals, measuring achievement, behaviour management, etc. The second factor surveyed attitudes to the effects (positive and negative) of integrated students with disabilities on the classroom. The third factor dealt with whether teachers had enough time for instructional planning and the fourth factor was concerned with the level of support (material and personnel) readily available.

Twenty-one (80%) of the public school districts in three North Eastern Ohio counties agreed to participate in the Gans study. Regular educators were randomly selected once they fulfilled the criteria needed to balance gender, grade level and subject areas taught. These characteristics were thought to be influential in the formation of attitudes toward handicap-integration surveys (Larrivee & Cook, 1979). All special educators were sampled in each district into four factors (as identified above) by a principal components factor analysis. The make-up of these factors was similar for both the special and regular educators.

Results of the Gans study indicated that regular classroom teachers were influenced more by individual characteristics (especially the number of handicaps the student had) than by attitudinal variables. The reverse effect was observed for the special educators. Both groups yielded a 96%

predictive accuracy. While regular teachers scored a high 93 standardized co-efficient for the importance of the variety of handicapping conditions, they recorded a 0.0 for Factor 4, which dealt with support material available. It would appear that regular teachers find the number of handicaps that a student has much more important than being concerned with materials available. Gans also reports that the study is weakened somewhat by the fact that teachers confirmed that they were torn between how they should respond for professional reasons and their actual reasons.

Coates (1989) surveyed 94 regular classroom teachers in Iowa, in a bid to determine to what degree regular classroom teachers supported the underlying beliefs of the Regular Education Initiative. Proponents of this initiative believe that it is more beneficial for intervention to occur in the regular classroom than for a student to be taken out of the classroom. The Regular Education Initiative came about in 1985 as a result of a speech made by Madeleine C. Will, assistant secretary for the Office of Special Education and Rehabilitation Services, where she argued that 'pull-out' programmes for students with disabilities stigmatized students and resulted in lower expectations. In 1986, when Wang, Reynolds and Walberg presented a paper criticizing the pull-out approach and advocated collaborative models (eg. teacher assistance teams), the stage was set for the birth of a new initiative – the Regular Education Initiative.

Coates (1989) designed a 15 item survey to measure the regular teacher's agreement or disagreement with views advocated by the Regular Education Initiative. An example of the former would be following item (and the item pertinent to this paper): "Given additional support, I would be

able to meet the educational needs of mildly handicapped students in my class without the need for a resource room”. An example of an item that disagrees with the views of Regular Education Initiative is “Resource rooms are not an effective model for meeting the educational needs of mildly handicapped students” (Coates, 1989, Appendix 2a).

In the Coates study (1989), teachers were asked to respond to each item on a 5-point Likert Scale. Two open-ended queries were also included. Selected teachers were sent a survey with an explanatory letter. Subjects were given 4 weeks to return the completed survey, being contacted by phone if they had failed to do so after 5 weeks. The response rate was 75% (94 teachers).

The general trend of responses indicated disagreement with the underlying assumptions of Regular Education Initiative. Items were given a numerical value to indicate the level of agreement (1) and disagreement (5) with Regular Education Initiative philosophy. The item on support scored 3.74, indicating that these general classroom teachers, even with support, did not perceive themselves as being fully equipped to support students with mild disabilities in a regular setting. Regular teachers were particularly concerned with students who “fall through the cracks” and these students were perceived to need more one-to-one assistance.

Myles and Simpson (1989) sought information on the classroom modifications regular classroom teachers would request if they were to accept a mildly handicapped student into their regular classroom. This study was prompted by the recognition that the regular and special education systems, although associated, are largely independent of each

other. Proposals to marry both settings (Reynolds, Wang & Walberg 1987) have added fuel to the debate and as mentioned earlier, spawned the birth of the Regular Education Initiative. Myles and Simpson (1989) set out to determine the factors that would influence regular classroom teachers to actively nurture the underlying assumptions of the inclusion of students with mild disabilities into their regular classroom. They devised an instrument to elicit this information. It comprised (a) a cover letter, (b) instructions (c) a vignette of a hypothetical boy (labelled and unlabeled profiles of educable mentally handicapped boys, behaviour disordered boys, and learning disabled boys), (d) fifteen questions on mainstreaming options and (e) eight questions of a demographic nature. The vignettes were field tested by independent special education doctoral students to confirm their lucidity and accuracy.

One hundred regular education teachers took part in the Myles and Simpson (1979) investigation. They varied in age, experience, grade level taught, area of certification and district size. Twenty six percent were recruited from a Kansas mid western suburban school district. The remaining 74% were enrolled in university remedial reading and special education introductory courses. The response rate was 90% for teachers and 100% university enrollees.

Myles and Simpson randomly assigned vignettes of students labelled educable mentally handicapped, behaviour disordered and learning disabled to regular classroom teachers. They were told that this student was to be enrolled in their class and to make the minimal classroom modifications necessary that would persuade them to be confident in supporting this child

fully in the regular classroom. The list of classroom modifications was a result of a 1997 survey conducted by the National Education Association ("Teachers Opinion Poll, 1975) and from current educational trends. These included, " (a) decreased class size, (b) additional planning time, (c) assistance of a paraprofessional, (d) availability of support service, (e) consultation with a special educator, and (f) inservice workshops (p482).

In the Myles and Simpson (1979) study, half of the resulting modifications dealt with support facilities perceived necessary by the regular educators in order to support students with disabilities in the regular classroom. The teachers were also asked to compare their preferred classroom conditions to their realistic classroom situation relative to each of the above variables. Finally the teacher was asked whether they would integrate the student with or without the modifications they had suggested. This probe sought to (a) compare differences in the type and number of changes needed to convince regular classroom teachers to integrate labelled and unlabeled handicapped children into their classroom, (b) compare actual and preferred support services, (c) determine the willingness of regular classroom teachers to integrate a variety of handicapped students into the regular classroom contingent upon identified education modifications. Seventy eight percent of the respondents selected support services and modified class size, as opposed to 27% choosing inservice training.

The factorial analysis of variance procedure yielded no significant difference between the levels of modifications. There were no differences between classification and labelling, and between actual and preferred class sizes, number of consultations services, amount of planning time,

availability of paraprofessionals and the number of in-sessions training sessions.

The surprising result indicated no significant differences between actual and preferred number of support services. When the types of support services were broken down, regular teachers indicated that special educators and psychologists were more valuable than counsellors. Interestingly, the role of counsellors and crisis teachers were least preferred of the support services. Perhaps the most significant finding is that, contingent upon consideration of their concerns regular classroom teachers are very willing to include students with disabilities.

In this Myles and Simpson (1979) study, there were no statistically significant differences between the number of modifications selected by teachers as a function of the category of student. Teachers did indicate that class size and support services were the most desirable changes if a student with a disability were to be enrolled in their class. In addition, most teachers identified the use of a paraprofessional for at least five half days per week was needed for successful integration. Teachers specified behaviour management and instructional techniques as their preferred type of consultative support service. Respondents seemed to suggest that with the proper levels of support services and resources they would assume instructional responsibility for handicapped students mainstreamed into their classroom.

Although there was no significant difference between actual and preferred support services, the fact that 78% of the teachers selected the support category as a modification suggests that they are not receiving this

support. It can also be interpreted that support personnel are not providing the type of service expected by regular classroom teachers.

Center and Ward (1987) conducted an extensive study on regular teachers' attitudes to inclusion. Of the 2,219 teachers surveyed, 74.9% supported mainstreaming for students with mild mobility or sensory disabilities. In the same survey, having sufficient resources for mainstreaming was identified as a key-determining factor influencing attitudes to mainstreaming. The respondents were asked how many of their opinions on integration would change if they had access to a greater number or frequency of support services. More than half of the group indicated that this factor alone would make them alter their attitude to integration in a more positive fashion.

The survey also sought to elicit data about teacher's attitudes towards current support services. The results indicated that the school counsellor service is considered to be the most effective service of all those provided by school in order to effect successful mainstreaming of disabled children. This is in dispute with the findings referred to earlier by American researchers, Myles and Simpson (1989).

The mean satisfaction level for all support categories for all categories of children with disabilities was extremely low (15%). The main reason for this dissatisfaction stems from the unavailability or paucity of such services (7.8% satisfaction rate in Catholic School). Because the counselling service is the only one that operates regularly, it has become overloaded, resulting in school counsellors becoming less effective and

drawing sharp criticism from teachers. It is this lack of adequate support that is associated with fostering negative attitudes towards mainstreaming.

An analysis of quantitative responses in this Centre and Ward (1987) study indicates that regular teachers require classroom aides and a decrease in class size whenever a child with a disability is included in the class. Seventy five percent of teachers approved of itinerant teachers of the intellectually handicapped, possibly indicating that they feel resource teachers on their own are unable to provide adequate support for such children. Fifty percent of the respondents were attracted by the notion of parental assistance in the classroom to support integrated children. This was particularly noticeable among Catholic teachers.

Center and Ward (1987) summarized the findings of their comprehensive study by stating that there was general dissatisfaction with the current support services offered in schools for children with disabilities. This deficiency was noted in both the quality and quantity of support services. They also point out that teachers do not necessarily want to replicate these services but are seeking alternative methods of support for the full inclusion of students with disabilities.

Parmenter and Nash (1987) documented a study on the inclusion programmes in two special schools. One school had 33 of its 66 students involved in integration, the other had 14 of its 26. Integration ranged from 3 hours per week to full time regular school attendance. Questionnaires were distributed to the staff of the two special schools (100% response rate), parents of the children in the two schools (55% response rate) and structured

interviews were conducted with 15 teachers in the regular schools in which the students were integrated.

Special education teachers noted that there is very little 'back up' assistance provided to the integrated children and they suggested that the regular class teacher also needs specialist assistance within the classroom. They also commented that integration was being conducted on the cheap as inadequate resources were being provided, especially at the regular school level. The small sample of 15 teachers from the regular schools limits the predictive validity and generalizeability of such data. Reports on the amount and type of support varied. The majority of teachers expressed dissatisfaction with the regularity of support.

The authors of this small study identified three factors important for the inclusion process. The first had to do with adequate planning, the second with support levels and the third with educating the community to accept a greater 'deviancy' among children. The authors claim that adequate resources to support the programmes of integration must be provided. These range from basic physical access to additional curriculum materials and modification of the School Curriculum. By providing access to the regular school curriculum, it is essential that the regular school receive the support of resource personnel who are adequately trained in the area of a special education.

Sigafoos and Elkins (1994), from the Schonell Research Centre in Queensland, investigated the concerns of teachers towards the integration of children with physical disabilities and multiple disabilities. The study was conducted at a regular secondary school servicing 1300 students aged 12-18

years. Seventeen teachers were selected by the principal to participate in the study. The authors acknowledge that this may have resulted in a biased and unrepresentative sample but indicated that the principal was in the best position to select teachers who had most contact with students with disabilities.

In the Sigafoos and Elkins study (1994), two questionnaires were developed, based on the Larrivee and Cook model (1979). Predictably, attitudes depended on the type and degree of disability. One pertinent outcome of the study was that the success of integrating children with multiple disabilities depends on the extent to which teachers received adequate. The emerging themes and concerns identified from analysis of teacher comments were, in order of priority, individual needs, degree of disability, disruption to classroom, peer interaction, need for support, time constraints and stress safety.

Sigafoos and Elkins (1994) note that school principals and guidance officers might lend support to the classroom teacher by way of assisting in the modification of curriculum and instruction techniques and by creating more favourable administrative arrangements. This would help make the inclusion programme be viewed in a much more positive fashion.

The Education Department of Western Australia (1993) has recently issued a new policy and guidelines for the education of children with disabilities. It specified individual policies for students with intellectual and physical disabilities, exceptional needs, autism, vision impairment and hearing impairment.

The policy states that:

“Schools will ensure that all students, irrespective of the degree of sensory, physical or intellectual disability, have the opportunity to be educated in the most educationally enhancing environment, consistent with the provision of a quality education which best meets the need of the individual student.”

(Education Department of Western Australia, 1993).

Education authorities in Australia have developed guidelines and policies in regard to the placement of students with disabilities into educational settings. The policies of Government Education Authorities, and Catholic and Independent Schools are all required to adhere to the dictates of recent legislation in every state concerning equal opportunity, social justice, community and health services (Education Department of Western Australia, 1993). These policies have been developed to focus on inclusion whenever possible and feasible, on parental involvement and on the need for support structures.

Australia has made major changes in regard to the educational provision of students with disabilities. These changes include the shift from the provision of these educational services in segregated settings to integrated settings and the development of the idea of inclusive schooling. There is also recognition that special educational settings may best meet the needs of some students with disabilities (de Lemos, 1994.).

de Lemos (1994) demonstrated that primary and secondary schools are more dependent on visiting staff than special schools. The majority of teachers expressed a need for more professional development activities to assist them in their task of facilitating the successful integration of students

with disabilities. Variations in curriculum focus were noted in the different settings. Major areas of concern for both principals and teachers alike had to do with staffing and being able to access support specialist services. More one-to-one contact for students with disabilities was recommended. While the philosophy of integration was generally welcomed, some schools were experiencing problems putting the policies and theories into practice. These difficulties were in the main related to staffing and resources and the lack of training for teachers who had students with disabilities in their mainstream class.

Conclusion

The body of research worldwide confirms an increase in an acceptance of the doctrine of normalisation and inclusion of students with disabilities into regular classrooms. While there are many concerns being voiced by regular classroom teachers and despite the recent global legislation in all developed countries, the problems of adequate support for the integrated students still remain. While many of the articles in this literature review cite support as being essential to integrated students with intellectual disabilities, there seems to be nothing definitive about the type or the level of support deemed necessary to support the integrated student across levels of ability. Even the comprehensive research synthesis by Scruggs and Mastropieri, while acknowledging the need for resources and support for students with disabilities, does not enter into discussion on this topic. The levels of support, both physical and personnel, are still foremost in the list of variables that affect teachers' attitudes towards the integrated student. It

would seem that this problem, identified during the birth of integration almost 40 years ago, is one that can only be solved by powers greater than the mere classroom teacher.

Yet research into regular teachers' attributions of perceived support levels for students with disabilities included in regular classes has been limited, especially in Western Australia. This paucity of research in the area of support for regular classroom teachers of students with disabilities and the absence of research specifically in the area of additional support for regular classroom teachers of integrated students with disabilities makes the present study worthwhile. It is anticipated that the results of the present study will prove useful to principals and educational administrators in Western Australia when making decisions on support levels and funding for integrated students with disabilities. Will the results confirm the findings of Weiner (1970) and Clarke (1997) in regard to ability being the defining factor that is responsible for the success of a learning disabled student in the regular classroom? Will teachers see a difference between the need for additional physical and additional personnel support? Do regular classroom teachers perceive a difference between the needs of the mild and severely intellectually disabled in regard to additional physical and personnel support? Does effort affect regular teachers' perceptions of the need for additional support for students with intellectual disabilities?

Chapter 3

Methodology

In this chapter, the selection and samples of the measurement tools are presented, the design of the study explained and the procedural methodology described. The chapter ends with the formulation and presentation of the hypotheses.

Measurement and variable selection

As the researcher was attempting to measure teachers' attitudes, this required a quantitative measurement tool. One to one and group interviews were discarded as possible measurement tools because of the time needed to conduct them, their timetabling implications and their susceptibility to researcher's subjectivity. The questionnaire was chosen because of its user friendliness to subject and researcher, the brevity of time taken to complete it (ten items in total) and its ability to be used successfully in group situations. The researcher used a seven-point Likert scale to ensure responses that could be measured more accurately. The magnitude scaling was used to confirm (or dispute) the responses of the questionnaire.

The two dependent variables selected for this study were additional physical and additional personnel support for the regular classroom teacher to assist integrated students with intellectual disabilities. These variables were selected because they have not been the subject of any such study in Western Australia, despite being cited as a major concern of regular classroom teachers who teach integrated students with intellectual disabilities (Scruggs & Mastropieri, 1996; Center & Ward, 1987).

Additional physical support refers any additional curriculum resources (textbooks, remediation and extension materials, enrichment programmes, computers and software), used to support specific students in the regular class. Additional personnel support refers to any additional personnel (specialist teachers, aides, paraprofessionals, volunteers,) who are employed to support students with disabilities included in the regular class.

Measurement tools

For the purpose of this study, the researcher developed a vignette describing a hypothetical male student. Empirical evidence indicates that the majority of students with disabilities are male (Hallahan & Kauffman, 1980). The hypothetical student, Brian, was described in two key areas (See Excerpt 3.1, p 56). It included a statement of the level of his learning ability in terms of the presence or absence of an intellectual learning disability. Where Brian was described as having an intellectual learning disability, this disability was described as being mild or severe. A statement on the typical pattern of effort expended by Brian in the classroom formed the second key area. Effort was reported in terms of a good deal of, a modest amount of or little effort.

Excerpt 3.1 (Appendix D)

Vignette

“Brian is a potential student for your class next term. Recent psychological testing indicates Brian has no / a mild / a severe/ intellectual disability compared to students of his age. He currently undertakes instruction in the core subject areas of Mathematics, English, Social Studies and Science. Brian participates in social activities and is aware of school rules. He always / sometimes / rarely/ works hard in class, making a good deal of / a modest amount of / little/ effort to complete assignments and homework. He can participate in group work, likes soccer and has two pet rabbits of which he is very fond. Brian’s parents are anxious that he adjusts well to his new school and hope that he can settle smoothly into his new environment.”

The researcher developed a seven-point Likert scale questionnaire to measure regular teachers’ responses to their perceived additional support needs for the student described in the vignette. The researcher chose a seven-point scale to give teachers more opportunity to accurately indicate the level of their response.

Measurement A sample (Appendix E)

1. How many additional resources will you need to give adequate support to Brian in **Mathematics** lessons?

1 2 3 4 5 6 7
Very few very many

Measurement B sample (Appendix F)

1.How much additional personnel support would you need to help Brian in outdoor activities?

1	2	3	4	5	6	7
Very little						very much

The researcher developed a magnitude scaling measurement (See Measurement C) in regard to perceived physical and personnel support levels in order to confirm the results of the questionnaire.

Measurement C
(Appendix G)

Magnitude Scaling

1. Rate the additional support necessary for a newly enrolled student with average learning ability who puts in an average amount of effort.
2. Rate the additional support necessary, in terms of physical resources, for a newly enrolled student with a severe/mild/no/ intellectual disability, who makes no/a modest amount/a great deal of/ effort at classwork.
3. Rate the additional support necessary, in terms of personnel resources, for a newly enrolled student with a severe/mild/no/intellectual disability, who makes no/a modest amount/a great deal/ of effort at classwork.

Instructions to teachers
(Appendix C)

The following instructions were developed to be read out to the respondents:

“My name is Rory Mc Nally and I am currently undertaking a Masters degree in Special Education. Thank you very much for agreeing to take part in this short survey. As I have explained to your principal, I am attempting to measure the levels of additional classroom support that you think are necessary for specific students in your class. Your responses and the school’s identity will remain anonymous and at no time will you have to declare any personal details. Your school will receive a copy of the overall study.

You should have 4 sheets in front of you – a student profile, Measurement A, Measurement B and Measurement C.

At the end of each short task, please indicate that you have completed it by putting your pen down.

We'll begin with the profile of a hypothetical student, Brian, who could be a potential student in your class next term. Please read carefully through the profile in front of you.

Please turn to Measurement A - this measures additional physical support in respect of Brian.

By physical support I am talking about additional curriculum resources, textbooks, remediation and extension materials, enrichment programmes, computers and software etc.

If you circle a 7, you feel that Brian needs the maximum amount of additional physical support, if you circle a 4, you think he needs moderate additional physical support and if you circle a 1, you think he needs minimal additional physical support.

Please complete Measurement A only

Now we turn to Measurement B
- this measures additional personnel support in respect of Brian..

By additional personnel support, I am talking about aides, paraprofessionals or volunteers.

Circle the 7, if you feel that Brian requires an aide, paraprofessional or volunteer for six hours per day, circle a 4 for three hours per day or circle a 1 for approximately one hour per day.

Please feel free to refer to your profile again and now complete Measurement B.

Now turn to Measurement C.

You will be asked to draw lines. Lines go from left to right, starting at the dot on the left hand side of the page. Please do not go as far as the edge of the paper.

Lines of different length indicate different levels of additional support

Please look at item 1 which requires a linear response to the level of additional support you think a student of average ability would need. By additional support here, I mean a combination of physical and personnel support.

For example, a line up to a centimeter long would indicate minimal additional support, a line towards the centre of the page indicates moderate additional support and a line towards the edge of the page would indicate maximum additional support. (Researcher models).

Please complete item 1.

Now, please indicate your level of perceived additional support for Brian, as described in items 2 & 3.

Thank you very much for your time.”

Trial and amendments

Ethical permission was obtained from the University Ethics Committee to conduct the study. The seven-point scale and the magnitude scaling measurements were given to 17 professional adults in order to ascertain the reliability of the measurement tools. Some alterations were necessary, based on the results of this trial. Two items were deleted from the second section of the questionnaire (Measurement B), as there appeared to be some ambiguity and overlapping in the content of both items. Excluding these two items, Cronbach's Alpha indicated a reliability of 0.81 for Measurement A, a reliability of 0.76 for Measurement B and a reliability of 0.76 for both sections of the questionnaire combined.

The original vignette contained the term 'learning disability' and this caused some confusion to the respondents, some of whom wanted a less

ambiguous term. As a result, this term was replaced with the term 'intellectual disability'. The researcher found that during the trial it was necessary to establish when the respondents were finished each measurement tool. This resulted in the inclusion of a request for respondents to put their pens down when each section was completed. The researcher also underscored words and phrases in the 'instructions to teachers' section that required emphasis. The word 'vignette' was replaced by the term 'student profile' in the instruction section. This was to facilitate a quicker understanding of the purpose of the vignette on the part of the respondents.

Subjects in the study

The total Catholic Primary School teaching staff in Western Australia numbered 1628 in 1997. Three hundred and thirty of these were male and 1298 female, making the then ratio of male to female teachers almost 1:4. This study surveyed 72 female regular classroom teachers from nine schools. A cluster of nine Catholic Primary schools was chosen from the same metropolitan area as a convenience sample and all female classroom teachers were invited to participate in the study. The researcher did not include male teachers, as he did not want to complicate the study by leaving it open to a possible gender effect.

Seventy-two teachers read a vignette on the hypothetical student. They then responded to two sections of a questionnaire. Measurement A sought responses (using a seven-point Likert scale) to teachers' expected levels of additional physical classroom support for the hypothetical student. Measurement B sought responses to their perceived need for additional

personnel support for the student. A secondary tool, by means of magnitude scaling (Measurement C), was employed to measure regular teachers' attitudes to both physical and personnel support for integrated students with disabilities. Measurement C sought a quantitative measurement of the teachers' expected additional support levels (physical and personnel) for the hypothetical student.

Study Design

The design of this study included three independent variables (school, ability and effort). Eight schools participated in the study. They were all Catholic schools located in the eastern-metropolitan area of Perth. All of these schools have a similar fee structure. It can thus be assumed that each school had a similar cultural, historical and religious student make-up. Because of the similarity in the type of schools used in this study, it was not anticipated that a school factor would be a critical variable in this study. Because of the similarity of schools, it was anticipated that it would not matter which of the schools the teachers worked in analysing their responses to the measurement tools. If an interaction between the schools and other factors were to be revealed, a multi-level analysis would be performed on the data.

Ability was divided into three levels. One level was established as average intellectual ability. This refers to a student who has normal cognitive functioning and would be expected to perform academic tasks at a moderate level. A second level of ability was established as mild intellectual ability. This refers to mental development at between one-half and three-

quarters of the normal rate and which has been assessed at an IQ between 50 and 69. The third level was severe intellectual disability and this is defined as mental development at less than one-quarter of normal cognitive growth and assessed at an IQ of between 20 and 40.

The effort variable was also divided into three levels; low, moderate and high. Effort refers to the level of input that a student expends in the areas of classwork, assignments and homework. Ability and effort were matched in each level to form a nine-cell design (See Figure 3.1).

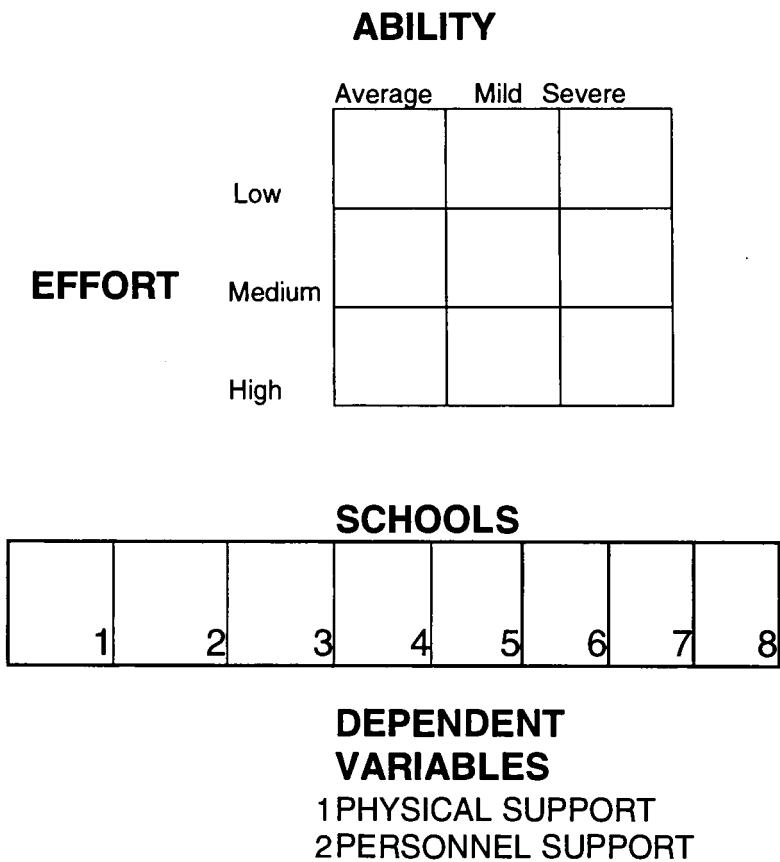


Figure 3.1 Study Design

Procedure

The principal of each of the nine schools in the study was contacted and permission sought to meet with nine female teachers from each school. They were told that the project would attempt to measure teachers' expectations with regard to additional physical and personnel classroom support for a hypothetical student. The researcher compiled a list of 72 eligible teachers from the nine schools and put them in alphabetical order by surname. A vignette was then randomly assigned to each name on the list. The number of teachers varied from school to school and because of the random selection method employed, it was possible that two or more teachers from the same school responded to measurements on the same vignette.

The researcher made arrangements with the principal of each school to meet the teachers in groups. He met with four groups prior to the commencement of school, three groups after school and two groups at the commencement of their scheduled staff meeting. Meeting locations varied. In some schools the researcher was required to use the staffroom, in other schools, the library and in one school, the classroom. The researcher had to revisit two of the schools, one because two staff members were unable to attend on the appointed day, the other because the results of two of the respondents were identified as outliers and the teachers had to be replaced.

In each group, the researcher and the teachers invariably had a brief conversation prior to the commencement of the task. Questions were asked about the purpose of the study, the anonymity of the respondents, the expected responses and the length of time the task would take. The

researcher gave each teacher in the group the assigned vignette and Measurements A, B and C, and read the instructions carefully and slowly for each measurement. The difference between additional physical resources and additional personnel resources was explained and any questions answered. Use of the Likert scale was explained, even though all respondents seemed to be familiar with it.

The correct response method to the magnitude-scaling tool only became clear when the researcher physically modeled how to respond to it. The researcher placed great emphasis on the fact that item 1 in this measurement referred to the expected levels of additional support for an average student making a modest amount of effort and that items 2 and 3 referred to the expected additional support levels for Brian. This modeling was repeated to ensure that all respondents were clear as to how to respond to this measurement. The eight respondents, who were assigned a vignette describing a student of average ability making a modest amount of effort, were reminded that there was no difference between the student described in item 1 and the student in their vignette.

Response rate

The response rate was 100%. The procedure employed in this study guaranteed a full response rate. Because the researcher was physically present to collect the data, there was no possibility of the teachers forgetting to fill in the responses or having to post them. When teachers could not make the appointed time, the researcher simply returned to the school at a later date to collect the data. As all schools were located in the same

metropolitan area as the researcher lives in, the collection of data was made easier.

Hypotheses

HO¹: There will be no significant difference in regular classroom teachers' attributions of the need for additional support for students with and without intellectual learning disabilities.

H1¹: There will be a significant difference in regular classroom teachers' attributions of the need for additional support for students with and without intellectual learning disabilities.

HO²: There will be no significant difference in regular classroom teachers' attributions of the need for additional support for students exhibiting different levels of effort.

H1²: There will be a significant difference in regular teachers' attributions of the need for additional support for students exhibiting different levels of effort.

HO³: There will be no significant interaction between the factors of ability and effort with respect to needed support.

H1³: There will be significant interaction between the factors of ability and effort with respect to needed support.

The level of significance used for the various statistical tests was set at 0.05. The null hypothesis will be rejected if this level of significance is attained for the particular variable being tested. The experimental hypothesis will be rejected if the null hypothesis for the same variable is accepted.

Chapter 4

RESULTS

In this chapter, the results of the study are presented. The data were initially analysed using multivariate procedures (Wilks' Lambda). These revealed no interaction between the schools factor and the other independent variables, ability and effort. A multivariate analysis of variance was then employed to test for main effects of ability and effort on the dependent variables for the seven-point scale and the magnitude scaling. Both scales indicated a main effect for ability. Univariate analyses were used to test for differences between groups on both the seven-point and magnitude scaling instruments. A Scheffé test of multiple comparisons was used to explore differences between the three levels of ability for both scales. The data are presented on tables and figures for each of the measurement instruments. The results are then briefly summarised.

Outliers

It was necessary to examine the data for outliers. An outlier is a term used in statistical data and refers to extreme cases on one variable or a combination of variables that distort the pattern of data, with no logical reason being evident for these extremes. These data can be omitted from the study (Tabachnick & Fidell, 1996). Two participants were identified as possible outliers. In the seven-point instrument, one participant returned an

extraordinarily high level of expected additional support (both physical and personnel) for an average-ability student making a modest effort in class. This participant's expected additional support levels (average score = 5) were in contrast to the score of the other seven participants' responses for the same student (average score = 1.26). This participant returned a similar expected support level (average score = 1.09) as the other seven subjects (average score = 1.1) for the magnitude-scaling instrument for this same student.

Similarly, a second participant returned an unusually high level of expected additional support (physical and personnel) in the seven-point instrument for an average-ability student who was reported to make a low effort in class. This participant's expected additional support levels (average score = 5.8) are at odds with the seven other subjects' mean expected additional support levels (average score = 2.3) for the same student. This participant also returned a similar (average score = 1.84) expected additional support level as the other seven subjects (average score = 1.62) for this same student.

These data indicated that these two participants could have misunderstood the criteria and required procedure for completing the seven-point instrument. They indicated a very high level of additional support for an average student, which was at odds with their expectations of the same additional support for the same student in the magnitude-scaling instrument. Both participants were defined as outliers and their results were not included in the study. Data were then collected from two different participants under the same conditions as prescribed for those excluded from the analysis.

These two new participants were taken from the original list of randomly assigned teachers. The data were then analysed using multivariate procedures. The independent variables were ability, effort and school. The multivariate analysis yielded no significant interactions among ability, effort and schools.

These outliers were not replaced to strengthen the results of the study or to 'suit' the researcher's data. The researcher could find no logical explanation for these extremes of additional support for students of average ability and thus chose to exclude these data from the study.

Reliability and validity

Cronbach's Alpha indicated a reliability of 0.81 for the dependent variable physical support, 0.76 for personnel support and a combined reliability of 0.76 for both dependent variables. Content validity was determined as a result of the trial using 17 professionals. They indicated that the measures covered the definition of each variable. With regard to construct validity, appropriate alterations were made to the items and instructions and the questionnaire was based on the well-established Likert scale, which efficiently distinguished high and low levels of attitude of the respondents. The random assigning of vignettes to teachers, the fact that each teacher received similar instructions and measurement tools, the fact that each response was scored in the same fashion and each teacher had an equal opportunity to ask questions if they were unsure about any aspect of the study gives these results an implicit acceptable validity

The schools variable was not included in any further analyses as no major differences in ability and effort could be ascertained among the individual schools (See Table 4.1). The schools factor was not involved in any significant multivariate three-way interaction ($F = 0.522, p > 0.01$). The schools factor was not involved in any significant interaction with the ability factor ($F = 0.617, p > 0.01$), nor with the effort factor ($F = .474, p > 0.01$). The relatively uniform level of mean responses among schools was not a surprising result and this confirmed the researcher's earlier prediction that there would be no interaction between the schools factor and the other independent variables.

Table 4.1 Multivariate tests of main effects and interactions for schools/ability/effort (N = 72)

<u>Effect</u>	<u>Value</u>	<u>F</u>	<u>Error df</u>	<u>Sig</u>
<u>Ability x School</u>				
Wilks' Lambda	0.610	0.617	44.000	0.878
<u>Effort x School</u>				
Wilks' Lambda	0.677	0.474	44.000	0.963
<u>Ability/ Effort x School</u>				
Wilks' Lambda	0.544	0.522	44.000	0.968

A multivariate analysis of variance was performed on the two dependent variables, additional physical support and additional personnel support, for the factors ability and effort. SPSS MANOVA was used for the

analyses of main effects. The total N was 72 teachers. Wilk's criterion indicated no significant multivariate interactions between the factors ability and effort. There was no significant effect for effort ($F = 1.349, p > 0.01$), however, the multivariate results yielded one main effect (See Table 4.2). A significant effect ($F = 19.866, p < .001, df = 71$) was noted for ability. No significant effect was noted for the interaction of ability and effort ($F = 0.781, p > 0.01$).

Table 4.2 **Multivariate tests of main effects and interactions**
using seven-point scale for ability/effort (N=72)

<u>Effect</u>	<u>Value</u>	<u>F</u>	<u>Error df</u>	<u>Sig</u>
<u>Ability</u>				
Wilks' Lambda	0.371	19.866	124.000	0.000
<u>Effort</u>				
Wilks' Lambda	0.918	1.349	124.000	0.256
<u>Ability x Effort</u>				
Wilks' Lambda	0.906	0.781	124.000	0.620

Seven-point scale

Regular classroom teachers perceive that students of average ability would require significantly less additional physical resources than students with a mild intellectual disability ($MD = 1.7083, p < .001, df = 71$) or a severe intellectual disability ($MD = 2.2500, p < .001, df = 71$). Table 4.3

displays the relevant data. Scheffé post hoc comparisons were used to compare means.

Figure 4.1A depicts the average score for those of average, mild and severe ability, in regard to perceived additional physical support levels for the seven-point data. There appears to be an overall difference in the pattern of data at the mild and severe levels of ability indicating a possible interaction, however this difference indicated a non-significant result ($p > 0.01$).

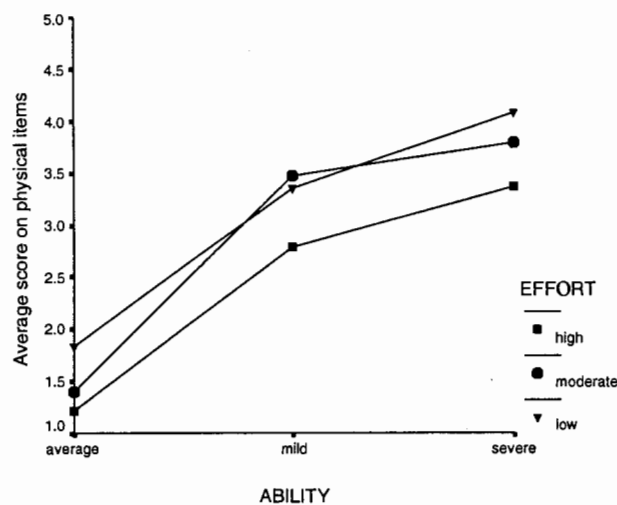


Figure 4.1A **Score on physical items for ability/effort levels**
for the seven-point scale

Figure 4.1B graphs the differences between all ability levels in regard to additional personnel support for the seven-point data. Univariate tests indicated that the differences between all ability levels were significant. Again, despite the appearance of an interaction in the pattern of

data, the disparity was not sufficient to indicate a significant interaction ($p > 0.01$).

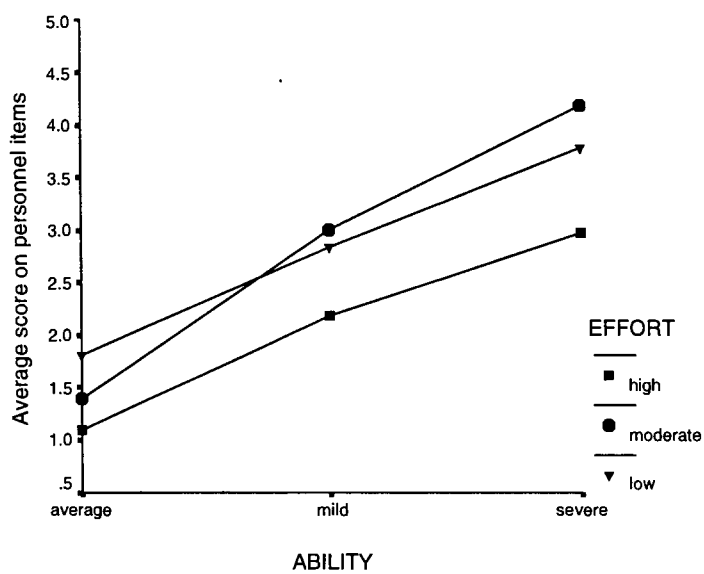


Figure 4.1B **Score on personnel items for ability/effort levels**
for the seven-point scale

The data in table 4.4 show the seven-point instrument in regard to additional personnel support. There were significant differences between all the profiled levels of ability. Teachers perceived that students of average ability would require significantly less additional personnel support than students with mild ($MD = 1.2423$, $p < .004$, $df = 71$) and severe intellectual disabilities ($MD = 2.2111$, $p < .001$, $df = 71$). Students with mild intellectual disabilities were perceived to require significantly less additional personnel

support than students with severe intellectual disabilities ($MD = 0.9688$, $p < .024$, $df = 71$).

Table 4.4 Comparison of ability levels for the seven-point data

Dependent variable	(I) Ability	(J) Ability	Mean Difference	Std. Error	Sig.
Need for additional physical resources	Average	Mild	-1.7083*	0.238	.000
		Severe	-2.2500*	.238	.000
	Mild	Average	1.7083*	0.238	0.000
		Severe	-0.5417	0.236	0.094
	Severe	Average	2.2500*	0.238	0.000
		Mild	0.5417	0.236	0.094
	Average	Mild	- 1.2423*	0.329	0.004
		Severe	- 2.2111*	0.329	0.000
personnel resources	Mild	Average	1.2423*	0.329	0.004
		Severe	- 0.9688*	0.325	0.024
	Severe	Average	2.2111*	0.329	0.000
		Mild	0.9688*	0.325	0.024

*. The mean difference is significant at the 0.05 level.

In summary, the findings from the seven-point data indicate that regular classroom teachers perceive a significant difference in the levels of additional physical support only between students with average ability and mild/severe intellectual disabilities. They do not perceive the need for a difference in the levels of additional physical support between students with mild and severe learning disabilities. However, when it comes to additional personnel support for the same students, regular teachers see the need for progressively more additional support as the level of disability of the target student increases.

Magnitude Scaling

The magnitude scaling data were analysed next (See Table 4.3). There was no evidence of any significant effect for the interaction of ability and effort ($F = .535, p > 0.01$). The combined dependent variables (personnel and physical support) were significantly affected by the ability factor ($F = 7.062, p < .000, df = 71$). The effort variable was not significant ($F = 1.061, p > 0.01$).

The multivariate tests confirmed the importance of the ability dimension. Univariate analyses were used to explore the major differences between groups on both the seven-point scale and the magnitude-scaling instrument.

Table 4.3 **Multivariate tests of main effects and interactions**
using magnitude scaling for ability/effort (N=72)

<u>Effect</u>	<u>Value</u>	<u>F</u>	<u>Error df</u>	<u>Sig</u>
Ability				
Wilks' Lambda	0.371	7.062	44.000	0.000
Effort				
Wilks' Lambda	0.832	1.061	46.000	0.387
Ability x Effort				
Wilks' Lambda	0.830	0.535	44.000	0.823

Scheffé's contrasts were applied to the magnitude scaling instrument data (See Table 4.5). Again regular classroom teachers perceived that students of average ability would require significantly less additional physical resources than students with a mild intellectual disability (MD = -3.4363, $p < .013$, $df = 71$) or a severe intellectual disability (MD = 5.9433, $p < .001$, $df = 71$). Tests on the differences between levels of ability also revealed that regular classroom teachers perceived little difference (MD = 2.5070, $p > 0.01$) in regard to the need for additional physical support for students with mild and severe intellectual disabilities. These data are similar to the findings from Table 4.4.

Students with average ability were perceived to require significantly less additional personnel support than students with severe (MD = 7.0932, $p < .001$, $df = 71$) intellectual disabilities. Students with mild learning disabilities were seen to require significantly less additional personnel support than students with severe intellectual disabilities (MD = 4.0936, $p <$

.003, df = 71). These results indicate that regular classroom teachers perceived a significant difference between mild and severe levels of ability when they made judgements between the levels of additional personnel support for students in their class. The data for the magnitude-scaling instrument confirm the findings of the seven-point data in regard to additional personnel support.

TABLE 4.5 Comparisons of ability levels for magnitude scaling

Dependent variable	(I) Ability	(J) Ability	Mean Difference	Std. Error	Sig.
Need for additional physical resources	Average	Mild	-3.4363*	1.059	0.013
		Severe	-5.9433*	1.059	.000
	Mild	Average	3.4363*	1.059	.013
		Severe	- 2.5070	1.059	0.081
	Severe	Average	5.9433*	1.509	0.000
		Mild	2.5070	1.059	0.081
Need for additional personnel resources	Average	Mild	- 2.9995*	1.057	0.032
		Severe	- 7.0932*	1.057	0.000
	Mild	Average	2.9995*	1.057	0.032
		Severe	- 4.0936*	1.057	0.003
	Severe	Average	7.0932*	1.057	0.000
		Mild	4.0936*	1.057	0.003

*. The mean difference is significant at the 0.05 level.

These findings support the findings from the analysis of the seven-point data. The magnitude scaling data revealed that regular classroom teachers perceived the need for a significant difference between students of average learning ability and students with mild or severe intellectual disabilities, in regard to additional physical support. They did not perceive a difference in the levels of additional physical support required for students with mild and severe intellectual disabilities. However, when regular classroom teachers made judgements about the levels of personnel support for students in their class, they perceived a significant difference between each of the three identified levels.

Figure 4.2A shows the differences for ability between average and mild and average and severe, in regard to the perceived need for additional physical for support for the magnitude-scaling instrument. There appears to be a considerable disparity between patterns of the levels of effort reported for the levels of ability, but no significant interaction was indicated ($p > 0.01$).

Figure 4.2B confirms the trend depicted in the previous graph by showing the differences between all ability levels in regard to additional personnel support. The data indicate a high concordance with the overall pattern of results reported in Figure 4.1B.

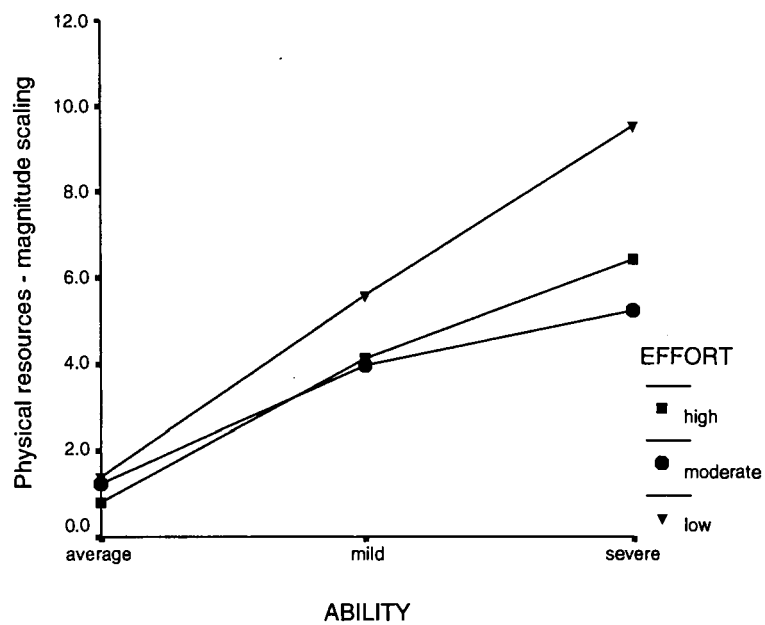


Figure 4.2A Score on physical items for ability/effort levels for magnitude scaling

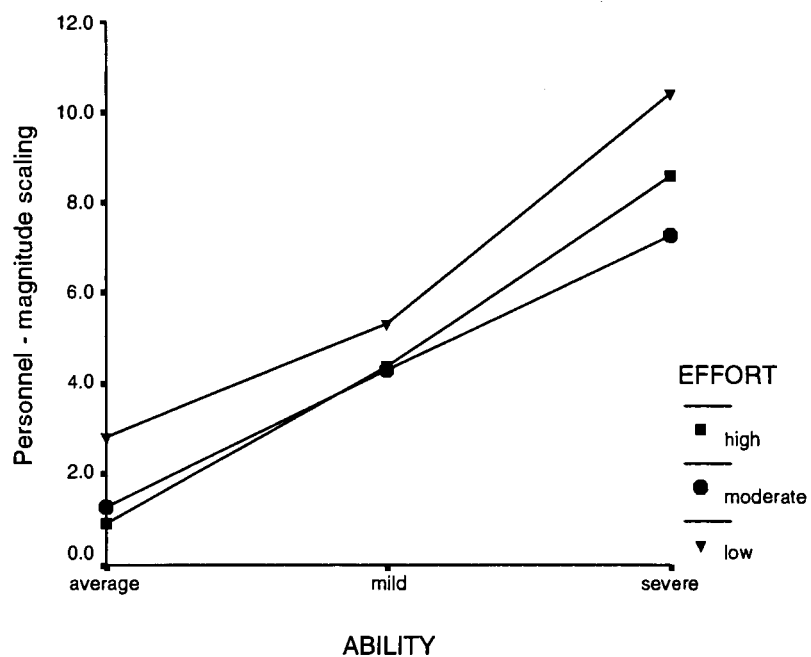


Figure 4.2B Score on personnel items for ability/effort levels for magnitude scaling

Summary of results

Results of this study suggest that regular classroom teachers see ability as a significantly important dimension when assessing the additional support levels they perceive necessary to for particular students in their classes. They perceive students with intellectual disabilities as needing more additional support than students of average ability, regardless of the effort expended by the student. However, with regard to additional physical support, they do not see a difference in the levels of support needed for students with mild and severe intellectual disabilities. With regard to additional personnel support, regular classroom teachers perceive a significant difference between all levels. The results of both the seven-point data and the magnitude scaling data strongly support these statements. These results are similar to the findings of Clark (1997), Weiner(1979) and Weiner and Kula (1970), who all found that ability was the major determining factor when teachers make judgements about students. The results of this study are at odds with Graham (1990) who found that effort and ability were linked to teachers' perceptions of support levels for students with intellectual disabilities.

HO¹ was rejected as a significant difference was noted in regular classroom teachers' attributions of the need for additional support for students with and without intellectual disabilities. HO² was accepted as no significant difference was noted in regular classroom teachers' attributions of the need for additional support for students exhibiting different levels of effort. HO³ was rejected as a significant interaction was noted between the factors of ability and effort with respect to needed support.

Chapter 5

DISCUSSION

Summary

This study set out to examine the attitudes of regular classroom teachers to perceived additional support levels for integrated students with intellectual disabilities. The dependent variables were additional physical and additional personnel support. The independent variables were schools, effort and ability. The design of the study matched the three levels of ability with the three levels of effort, creating a nine-cell design. The schools factor was not subjected to further analyses once it had been established that there were no significant differences between schools and that the schools factor did not interact with either of the other two independent variables. The subjects comprised 72 regular classroom teachers, employed in Catholic schools in an eastern metropolitan area of Perth, Western Australia. The measurement tools used were a seven-point scaled questionnaire and a magnitude-scaling instrument. Reliability and validity were established for these measurement tools.

The results of the seven-point data and the magnitude scaling were highly consistent with each other for both dependent variables. This study found that a student's ability is a determining factor on a regular classroom teacher's attributions of the student's performance. The results also support the findings of leading advocates of attribution theory. The results of this study concur with the findings of Clarke (1997), Weiner (1979) and Weiner and Kula (1970), who all reported that when teachers make judgements on student performance and support levels needed, they consider the ability of

the student a major influencing factor. Results of this study also indicated that regular classroom teachers do not consider the effort that a student expends on classwork as a major factor when making judgements about the levels of support that student needs. These findings are at odds with Graham (1990) who reported that effort was strongly linked to teacher's perceptions of support levels for students with intellectual disability. Regular classroom teachers see students with intellectual disabilities as requiring more additional physical support than their peers of average ability but they do not see any difference in the levels of additional support needed for students with mild and severe intellectual disabilities. However, when it came to additional personnel support, regular classroom teachers perceived a significant difference between the three levels of ability.

Conclusions

- There were no significant differences in ability and effort between the schools used in this study
- Regular classroom teachers do not take student effort into account when making judgements on the levels of support needed for that student.
- Regular classroom teachers do not see a difference in the levels of additional physical support materials needed for students with mild and severe intellectual disabilities.
- When ascertaining the need for additional personnel support, regular classroom teachers see a significant difference in the levels of support needed for average ability students, students with mild

intellectual disabilities and students with severe intellectual disabilities.

- Regular classroom teachers rate additional personnel support more beneficial than additional physical support for students with severe disabilities.

Limitations of study

This study has been limited to a small cluster of Catholic primary schools in a few neighbouring suburbs of Perth, Western Australia. Would the results be different in Catholic schools in different suburbs? Does the Catholic ethos influence the judgements of Catholic teachers of students who, because of an intellectual disability, require additional, specialised academic supports? Would a similar study in Anglican or State primary schools yield the same results? While the researcher acknowledges that the results cannot be generalised to all Catholic primary schools in Perth, in Western Australia or in Australia, there is little reason to suspect that Catholic teachers in other parts of Australia would cause these results to differ greatly. Similarly, the researcher acknowledges that the results of this study cannot be generalised to other privately run primary schools and public primary schools in Perth, in Western Australia or in Australia. Again the researcher has no reason to consider that there might be any significantly different results in a similar study in these schools.

Another limitation of this study is that all of the subjects were female and therefore, technically, the results are not representative of the general population of primary teachers in Perth, in Western Australia or in

Australia. However as female teachers significantly outnumber male teachers in private and public primary schools, it was deemed appropriate to use females only as the subjects in this study.

The researcher acknowledges that the measurement tools used in the study were less than sophisticated. There were only four items in one of the questionnaires. More items might have yielded an even higher reliability. However, the researcher is satisfied that the number of items measured what needed to be measured, was user friendly to the very busy teachers involved in the study and was appropriate to the level of this study.

This study was limited to measuring only two of the many additional supports available to regular classroom teachers for the successful inclusion of students with intellectual disabilities. The researcher acknowledges that regular classroom teachers may also receive additional supports in the form of class size reduction, extra administration time and professional development.

Implications for administrators

This study has implications for educational administrators here in Western Australia, perhaps especially those employed by the Catholic Education Office, in that it provides basic guidelines for the allocation of funding for students with intellectual disabilities. Catholic schools are currently funded for special education courtesy in part of Commonwealth and State grants, the shortfall made up out of the school budget. The study results indicate that regular classroom teachers see additional personnel support as being very important for the successful inclusion of students with

severe intellectual disabilities. They are the personnel mainly responsible for the success of the inclusion of students with intellectual disabilities. Their concerns should therefore be, at the very least, considered.

The study has implications for Commonwealth and State funding programmes for special education. The results suggest that the focus of funding for special education should be diverted to providing trained personnel to support regular classroom teachers in their bid to make inclusion successful. This, in turn, has implications for the directing of appropriate funding to adequately train personnel in the area of special education, rather than spend money on computers, software and remediation kits for students with severe intellectual disabilities. The results of this study suggest that students with intellectual disabilities are going to be more successfully included in the regular classroom as a result of having access to trained supportive personnel.

Educational administrators could use the results of this study to help them determine the type and level of additional support afforded to students with intellectual disabilities and to heighten awareness of the needs of students with intellectual disabilities. In the light of this study, Catholic Education Office administrators in Western Australia should perhaps reassess the method in which funds for special education are distributed and take into account the attributions of their classroom teachers with regard to additional support levels for integrated students with intellectual disabilities. The administrators might consider providing appropriate training for regular classroom teachers, in light of the section of the results that indicates regular classroom teachers consider the physical support levels for students with a

severe intellectual disability are no different to those for students with a mild intellectual disability.

Implications for teachers

A surprising result of this study was the fact that regular classroom teachers perceived no difference in the additional levels of physical support needed for students with mild and severe intellectual disabilities. This would seem to suggest that regular classroom teachers would use the same level and type of physical resources to support students with severe intellectual disabilities as students with mild intellectual disabilities. One possible explanation for this result is that regular classroom teachers grab the opportunity of receiving any additional physical resources to support students with intellectual disabilities and what matters primarily is to get the resources. Who it's for can be sorted out later.

Another more serious scenario is that regular classroom teachers are unsure about the different resource needs of students with mild and severe intellectual disabilities. This has implications for a heightening of awareness among regular classroom teachers of the needs of students with mild, moderate and severe intellectual disabilities. Regular classroom teachers would improve the level of success for the inclusion of students with intellectual disabilities if they could access appropriate seminars which delineated the types and levels of additional support most suited to the various levels of students with intellectual disabilities.

The results of this study also give guidelines to the regular classroom teacher in how best to use additional support that is available. Students with

severe intellectual disabilities will benefit more from additional personnel support as opposed to additional physical support. These results, coupled with their attendance at the seminars alluded to in the previous paragraph will ensure that the allocation of additional support for students with intellectual disabilities is optimally utilised.

Implications for schools

The implications of the results of this study for schools in Western Australia is connected to the type and level of additional support that is allocated to target students in the school, assessing the benefits of such support and redirecting additional resources to employing trained personnel to support students with intellectual disabilities. Perhaps the most salient implication for schools is that the concerns of regular classroom teachers in regard to additional support for integrated students with intellectual disabilities should be assessed and addressed so that students with intellectual disabilities can be successfully included in the regular class. If each Catholic school conducted a smaller, similar survey of its regular classroom teachers, then more informed decisions could be made about levels, types and recipients of additional support in the classroom.

Implications for research

The dearth of this type of study Australia-wide makes this study valuable as a starting point to examine more thoroughly regular teachers' attitudes to support levels for integrated students with intellectual disabilities or indeed to provide current data on the attitudes of the regular

classroom teacher to the whole notion of inclusion. With a growing number of advocates for fully inclusive schools in the U.S., it would seem beneficial to assess the current status of regular classroom teachers' attitudes to this concept here in Australia. Regular classroom teachers are the personnel who are most responsible for the occurrence of successful inclusion in schools. It would also be beneficial to explore the reasons why classroom teachers see a difference between the additional support needs of students with mild and severe only in respect to personnel support. This study could also be repeated in Western Australia's public primary schools and even extended to the secondary schools to compare results

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Appendices

A

STUDY EXPLANATION

Dear colleagues

For my Masters in Special Education, I am researching regular classroom teachers' attitudes to additional support levels for students with disabilities, who are mainstreamed. I am seeking your participation in this study as I feel that your expected levels of additional support for these students are crucial to their success in the classroom.

For this study, I require up to 9 female teachers who have had experience in the regular classroom. Your participation will take a maximum of 20 minutes, during which time, in a face to face session, I will explain the essence of the three measurement tools (short surveys) to which you will be asked to respond.

Your responses are totally anonymous. I am not interested in comparing the attitudes of different schools, nor am I seeking to make judgements on your personal knowledge in the area of special education. The aggregated results of the study will be made available to your school.

If you have any queries please contact me on:

Phone/Fax —



I would gratefully appreciate your cooperation in this study. Please indicate your intent to your principal and we can make a suitable time to meet.

Yours faithfully

Rory Mc Nally

B

CONSENT FORM

I agree to participate in Mr Mc Nally's research surveys, as detailed in his covering letter. I reserve the right to withdraw from the study at any time.

SIGNED _____ DATE _____

C

INSTRUCTIONS TO TEACHERS

“My name is Rory Mc Nally and I am currently undertaking a Masters degree in Special Education. Thank you very much for agreeing to take part in this short survey. As I have explained to your principal, I am attempting to measure the levels of additional classroom support that you think are necessary for specific students in your class. Your responses and the school’s identity will remain anonymous and at no time will you have to declare any personal details. Your school will receive a copy of the overall study.

You should have 4 sheets in front of you – a student profile, Measurement A, Measurement B and Measurement C.

At the end of each short task, please indicate that you have completed it by putting your pen down. We’ll begin with the profile of a hypothetical student, Brian, who could be a potential student in your class next term.

Please read carefully through the profile in front of you.

Please turn to Measurement A - this measures additional physical support in respect of Brian. By physical support I mean additional curriculum resources, for example, textbooks, remediation and extension materials, enrichment programmes, computers and software etc. If you circle a 7, you feel that Brian needs the **maximum** amount of additional physical support, if you circle a 4, you think he needs **moderate** additional physical support and if you circle a 1, you think he needs **minimal** additional physical support. Please complete Measurement A only

Now we turn to Measurement B - this measures additional personnel support in respect of Brian. By additional personnel support, I am talking about aides, paraprofessionals or volunteers. Circle the 7, if you feel that Brian requires an aide, paraprofessional or volunteer for **six hours per day**, circle a 4 for **three hours per day** or circle a 1 for approximately **one hour per day**. Please feel free to refer to your profile again and now complete Measurement B.

Now turn to Measurement C. You will be asked to draw lines. Lines go from left to right, starting at the dot on the left hand side of the page. Please do not go as far as the edge of the paper. Lines of different length indicate different levels of additional support Please look at item 1 which requires a linear response to the level of additional support you think a student of **average ability** would need. By additional support here, I mean a combination of physical and personnel support. For example, a line up to a centimeter long would indicate minimal additional support, a line towards the centre of the page indicates moderate additional support and a line towards the edge of the page would indicate maximum additional support.

(researcher models)

Please complete item 1.

Now, please indicate your level of perceived additional support for Brian, as described in items 2 & 3.

Thank you very much for your time.”

D

VIGNETTE

Dear colleague

Brian is a potential student for your class next term. Recent psychological testing indicates Brian has no / a mild / a severe intellectual disability compared to students of his age. He currently undertakes instruction in the core subject areas of Mathematics, English, Social Studies and Science. Brian participates in social activities and is aware of school rules.

He always / sometimes / rarely works hard in class, making a good deal of / a modest amount of / little effort to complete assignments and homework. He can participate in group work, likes soccer and has two pet rabbits of which he is very fond. Brian's parents are anxious that he adjusts well to his new school and hope that he can settle smoothly into his new environment.

Measurement A – physical support: By physical support I mean additional curriculum resources, for example, textbooks, remediation and extension materials, enrichment programmes, computers and software etc. to support specific students in your class.

NOTES: Measurement B – personnel support: By personnel support I mean additional personnel to support specific students in your class, for example, aides, paraprofessionals and volunteers.

In each questionnaire, you are asked to circle the numbered response that best reflects the level of additional support that you would expect in order to help Brian succeed in your class.

E

Seven-point measurement on additional physical support

(Measurement A)

1.How many additional resources will you need to give adequate support to

Brian in Mathematics lessons?

1	2	3	4	5	6	7
Very few						very many

2. How many additional resources will you need to give adequate support to

Brian in Reading lessons?

1 2 3 4 5 6 7

Very few very many

3. How many additional resources will you need to give adequate support to

Brian in Science lessons?

1 2 3 4 5 6 7
Very few very many

4. How many additional resources will you need to give adequate support to

Brian in Art?

1	2	3	4	5	6	7
Very few						very many

5. How many additional resources will you need to give adequate support to

Brian in **Religion** lessons?

1	2	3	4	5	6	7
Very few						very many

6. How many additional resources will you need to give adequate support to

Brian in **Health** lessons?

1	2	3	4	5	6	7
Very few						very many

F

Seven-point measurement on additional personnel support

(Measurement B)

1.How much additional personnel support would you need to help Brian in **outdoor activities?**

1	2	3	4	5	6	7	
Very little							very much

2. How much additional personnel support would you need to help Brian in **Church activities?**

1	2	3	4	5	6	7	
Very little							very much

3. How much additional personnel support would you need to help Brian in **small-group** activities?

1	2	3	4	5	6	7	
Very little							very much

4. How much additional personnel support would you need to help Brian in school **excursions**?

1 2 3 4 5 6 7

Very little very much

G

Magnitude scaling measurement on additional physical and personnel support

(Measurement C)

1. Rate the additional support necessary for a newly enrolled student with average learning ability who puts in an average amount of effort.
 -
2. Rate the additional support necessary, in terms of physical resources, for a newly enrolled student with a severe/mild/no learning difficulty, who makes no/a modest amount/a great deal of effort at classwork.
 -
3. Rate the additional support necessary, in terms of personnel resources, for a newly enrolled student with a severe/mild/no learning difficulty, who makes no/a modest amount/a great deal of effort at classwork.
 -

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