

THE SENSITIVITY OF THE ATTITUDES TOWARD MAINSTREAMING SCALE TO THE PREVAILING POLITICAL CLIMATE

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The Attitudes Toward Mainstreaming Scale (ATMS) was developed by Berryman, Neal and Robinson (1980) in order to produce an instrument that would be able to identify "influences, such as administrative policies, external regulations, and personal traits of educators on attitudes toward mainstreaming [one which] could be appropriately employed to measure changes that occur as a result of such variables as inservice education and continued experience with the mainstreamed student" (1980 p 202). The scale consists of 18 Likert type attitudinal statements concerning the efficacy of mainstreaming students with disabilities. It includes both general statements about mainstreaming as well as focussing on specific disabling conditions. On the basis of data gathered from a sample of 161 teachers and teachers-in-training an original scale of 22 items was reduced to 18 items and shown to have four factors of satisfactory validity and reliability. The scale was found to be easy to administer and thought useful with persons other than special educators. The first of the four factors was called Learning Capability and dealt with disabilities that do not necessarily impede academic progress; physical disability, mild sensory impairment, speech problems and health problems. The second factor was called General Mainstreaming and included statements about mainstreaming as an ideological 'good', the rights of all children to be educated, and the feasibility and longterm prospects of the policy. Mild intellectual disability was included in this group. The third factor, Severe Disability covered severe sensory deficits of blindness, deafness and athetoid cerebral palsy. The fourth factor, Social Behavior, contained only two statements; the behavior disordered and chronically disruptive students.

In a crossvalidation study of the scale published in the same year, Berryman and Neal (1980) have reanalysed the original data and, by using the conventional rule of accepting and interpreting only factors with eigenvalues greater than 1.0, determined on three factors. The reason for the reanalysis is not given but there is an inference in the report that the second sample of 164 teachers and teachers in training had yielded only three factors and forced a re-examination of the original interpretation. The three factors showed little variation to the earlier four factor solution except that the Social Behavior items were drawn into the General Mainstreaming factor and the athetoid cerebral palsy more clearly loaded on Severe Disability. This latter item had loaded .39 on Factor I and .38 on Factor III in the original factor solution so its separation was somewhat arbitrary. Berryman and Neal concluded that they had found three essentially identical factors for each of the two samples and that the factors themselves were reasonably independent.

A crosscultural study by Green and Harvey (1983) using a sample of 425 subjects (106 teachers, 252 teachers in training and 63 non teachers) in New Zealand found that by rotating factors with eigenvalues greater than 1.0 a four factor solution explained the data. The four factors were essentially the same as reported in Berryman, Neal and Robinson (1980) except that the mildly visual and hearing disabled were linked with the Learning Capability items and therefore not seen as a great problem for teachers. Green and Harvey found that forcing a three factor solution did not bring their structure closer to that found by Berryman and Neal (1980). They concluded that the validity and factorial validity of the ATMS warranted its continued use in assessing attitudes to mainstreaming and attitude change.

Berryman (1988) administered the ATMS to 404 adults who agreed to complete the scale at a shopping mall serving a small city/rural area in Georgia. No occupations are reported but presumably few, if any, were teachers. The data yielded five factors with eigenvalues above 1.0 but Berryman reported she could interpret only a four factor solution which retained some characteristics of the other studies but differed significantly on others. The ideological items remained together in a first factor called General Mainstreaming and a second factor contained the medical and speech problems. The Social Behavior and more severe teaching problem items (intellectual disability, severe sensory loss and athetoid cerebral palsy) were linked together in a third factor called Classroom Functioning. These eight statements are uniquely grouped when compared to the previous studies. Physical and mild visual disabilities were separated out in a fourth factor she called Learning Capabilities II.

The present study reports on the results of two investigations using the ATMS within the same population in the State of Victoria, Australia; the first in September 1984 (Harvey, 1985), and the second in October 1990. The importance of the study is that within the education system operating in Victoria the concept of the special educational facility as a recognised formal option open to education authorities is no longer viable. Special Developmental Schools for children with moderate to severe intellectual disabilities are available but for most disabling conditions it is an expectation of the system that these children will be educated in the nearest regular school. The policy follows from recommendations of an enquiry into educational services for the disabled which emphasised a "collective responsibility to enable regular classroom teachers to accept responsibility for all children" (Collins, 1984 p. 8). As a result of this change in educational policy it is now the responsibility of all schools to organise their affairs in such a manner that the structures 'enable' teachers to meet the needs of any child who presents for enrolment. Within this setting there is no element of choice for schools or teachers who are required by law to provide for the needs of all children.

METHOD

SUBJECTS

The teachers for both studies were drawn from staff lists of government and independent schools in the Gippsland region of the State of Victoria, Australia. Within the region are 214 elementary and 41 secondary government and independent schools. Although not required by law to accept all children it is both the tradition and intention of the major independent school system that they endeavour to meet the needs of all children seeking enrolment (Note 1). The remainder were all drawn from student lists of Monash University College Gippsland (formerly Gippsland Institute of Advanced Education). The teachers in training were enrolled in the School of Education, and the non teacher groups were drawn from the Schools of Social Science, Applied Science and Business.

In study one, of the 200 elementary and 150 secondary teachers selected, 137 (69%) and 105 (71%) respectively completed and returned survey forms. Of students enrolled in teaching studies courses at the University College, 137 survey forms were distributed with 110 (80%) returned. The group comprised 41 first year elementary, 30 third (final) year elementary and 39 one year secondary teachers in training. The non teachers were students in general psychology or mathematics and 84 (52%) of 161 forms distributed were returned.

In study two, of the 200 elementary and 120 secondary teachers selected, 120 (60%) and 69 (57.5%) respectively completed and returned survey forms. Of 92 forms distributed to students enrolled in teaching studies 88 (96%) completed forms, the group comprising 43 first year elementary, 25 third (final) year elementary, and 20 secondary students. Of a random sample of 100 students enrolled in social science or business courses, 52 (52%) returned forms.

PROCEDURE

In both studies the teacher and non-teacher groups were mailed letters requesting co-operation in the survey together with a questionnaire and stamped addressed return envelope. The letter offered to make a summary of the results available on request. All questionnaires were to be completed anonymously. Teachers in training were invited to complete a questionnaire, anonymously and voluntarily, during a regular tutorial session.

The questionnaire contained items of a social-biographical nature and the Attitudes Toward Mainstreaming Scale. The wording of the scale items were amended from the original to meet standards of expression acceptable within Victoria's educational system with, for example, "educable mentally retarded" becoming "mild intellectual disabilities" and "handicapped children" becoming "children with disabilities."

In both studies the data were pooled and submitted to principle components analysis (SPSS version 9 and SSPS-X, respectively) with VARIMAX rotation of

factors with eigenvalues greater than 1.0.

RESULTS

In Study One, three factors were identified with eigenvalues and variance accounted for of 8.09 and 45%, 1.79 and 10%, and 1.49 and 8.3% respectively. When orthogonally rotated, Factor One incorporated the general statements about mainstreaming as an ideological entity/ practical policy together with blindness, deafness, intellectual disability and athetoid cerebral palsy. Factor Two identified disabilities of a less serious nature; mild sensory impairment, speech problems, medical problems and the physically disabled. Factor Three reflected the persistent conduct problems and children with behavior disorders. The individual loadings are given in Table 1 where it can be seen that the items relating to mild sensory impairments and those with physical disabilities clearly contributed to Factor Two but also loaded above .40 on Factor One.

In Study Two, three factors were identified with eigenvalues and percentage of variance accounted for of 8.35 and 46.4%, 1.93 and 10.7%, and 1.19 and 6.6% respectively. The rotated solutions showed some similarities to study one in that Factor One comprised the same items which had made up the second factor in study one; mild sensory impairments (visual and hearing), physical disabilities, speech problems and medical problems. Table 1 shows that the items relating to the mildly hearing impaired and the physically disabled were equally prominent in the second factor which otherwise included the more severe sensory impairments and athetoid cerebral palsy. Factor Three comprised the General Mainstreaming items along with the mildly intellectually disabled, the behaviour disordered and persistent discipline problems. Table 1 shows that the item relating to students with mild intellectual disabilities also loaded above the .40 level on both the other factors. The analysis also shows that the concept of mainstreaming as a desirable educational practice, the feasibility of teaching a wide range of students in one class and opinions about the retention of mainstreaming loaded above .40 on Factor Two.

Table 1. Rotated factor loadings on the Attitudes Toward Mainstreaming Scale for 1984 and 1990 samples organised on basis of 1984 results.

No	ATMS Item	1984			1990			
		F1	F2	F3	F1	F2	F3	
1	In general integration is a desirable educational practice	.24	.42	.52		.71	.22	.07
2	Students (all students) have the right to be in regular classrooms	.13	.22	.64		.67	.20	.09
3	It is feasible to teach students who are gifted,	.09	.40	.64		.68	.05	.28

	of normal ability, or intellectually disabled in the same class			
4	Students who have mild intellectual disabilities. .43 .41 .50 should be in regular classes	.62	.24	.24
6	Students who are blind and cannot read .74 .29 standard printed material should be in regular classrooms	.61	.30	.12 .15
8	Students who are deaf should be in regular .19 .75 .29 classrooms	.59	.30	.16
11	Students with cerebral palsy who cannot .30 .62 .22 control movement of limbs should be in regular classrooms	.57	.35	.18
18	Integration will be sufficiently successful .18 .43 .55 to be retained as a required educational practice	.67	.18	.19
5	Students with visual impairments who can .66 .39 .20 read standard printed material should be in regular classrooms	.44	.61	.00
7	Students who are hearing impaired but not .59 .54 .25 deaf should be in regular classrooms	.48	.51	.00
9	Students who are physically disabled and .57 .58 .06 confined to wheelchairs should be in regular classrooms	.47	.58	.01
10	Students who are physically disabled but .57 .56 .03 not confined to wheelchairs should be in regular classrooms	.47	.62	.02
12	Students who stutter should be in regular .84 .19 .15 classrooms	.16	.77	.23
13	Students with speech difficult to understand. .25 .27 should be in regular classrooms	.25 .63	.28	.78
14	Students with epilepsy should be in regular .12 .26 classrooms	.22 .69	.27	.76
15	Students with diabetes should be in regular .86 .08 .18 classrooms	.08	.75	.10
16	Students with behavior disorders who cannot .09 .81 readily control their own behavior should	.23 .19	.78	.17

	be in regular classrooms			
17	Students who present persistent discipline	.20	.13	.79
	.18 .00 .79			
	problems should be in regular classrooms			

DISCUSSION

The first question arising from reported uses of the ATMS relates to the reasons the developmental (Berryman and Neal, 1980) and cross validation (Berryman, Neal and Robinson, 1980) and the present studies found three factor structures while Green and Harvey (1983) and Berryman (1988) obtained four factor solutions. A comparison of the prevailing political/administrative climates in which the various studies were conducted provide a possible answer. Berryman and Neal stress that their validation samples were not drawn from teachers involved in special education but their sample nevertheless were very familiar with mainstreaming and its expectations. They described them thus, "One hundred sixty one students enrolled in a course required by law of all teachers, school counsellors and school administrators in Georgia were used as the validation sample. The course concerns the nature of the various handicaps and appropriate methods to teach these children effectively in a mainstreamed classroom" (1980 p 200). To a large extent therefore there is a similarity between the Victorian and the Georgian (1980) samples in that the ethos of all concerned was toward the successful integration of students with disabilities into regular classrooms. None could claim ignorance of what was required or that the legislators were pushing for mainstreaming as the desired goal. On the other hand, the Green and Harvey (1983) and Berryman (1988) groups were drawn from populations in which we can assume an appreciation of the probable desirability of mainstreaming without the need for the respondent to have more than academic interest in the matter. Among the New Zealand group, there was a tacit understanding that mainstreaming was only one of many options open for children with disabilities and for the lay persons in the Georgian (1988) sample one must expect a naive view of what went on in schools. Of the studies yielding three factor solutions only the Victoria, Australia samples included non-teachers who had no direct connection with education. Nevertheless these control groups were all tertiary students and presumably aware of the publicity attendant on the implementation of integration policies. Resource problems associated with stringent economic conditions mean that from time to time public debates about the lack of integration teachers and integration aides feature in the media, particularly television and newspapers. The key to the question is that the General Mainstreaming items are not (except for mild intellectual disabilities) directly linked to particular conditions in the four factor solutions but are where three were found. The results suggest that the ATMS is able to distinguish the effects of administrative policies, external regulations and experiences with mainstreamed students.

A second question relates to the reasons why, in Study One, the General Mainstreaming items were linked with the more severe impairments and in

Study Two with the Social Behavior items. The reason seems to be a further indication that the ATMS is sensitive to the issues of the time. In the first study the integration policy was new and teachers were concerned then, not about the milder impairments or those which had no association with learning problems, but with the enrolments of children who were blind, deaf, unable to control one or more limbs or were intellectually disabled. The third group with which no one felt really comfortable were those children who posed chronic behavior and discipline problems. In the second study the teachers were no longer as concerned with the severely limiting disabilities as previously was the case, quite probably because aides were generally employed to assist teachers. With the exception of mild intellectual disabilities, the severely limiting disabilities were either linked with the milder impairments or spread between the two factors. It does seem important to note that students with intellectual disabilities remain a problem, although not as clearly defined a problem, to most teachers. Nevertheless, six years after the policy implementation it is the students with behavior disorders or who present persistent discipline problems who are linked with the intellectually disabled and who are seen as the major concerns for teachers and the ones about whom questions are raised. These questions include the feasibility of teaching to a full range of intellectual abilities in the one classroom or seeing integration as sufficiently successful to be retained as a required educational practice.

The lack of clear definition of important groups such as the hearing impaired, mild visual problems and the physically disabled as illustrated in the pattern of factor loadings on these items in study two, compared to the more clearcut delineations found by Berryman (1988), Green and Harvey (1983) and Harvey (1985) suggest that greater experience with mainstreamed children may call for less generalised statements and more definitive explanations of the type and degree of impairment intended. To describe a child as having a physical disability which requires a wheelchair for locomotion tells one nothing about an individual child but subjects will respond by linking their response to a child who is known to them. Although a perennial problem for attitude scales we may be moving past the time when one general all encompassing statement will suffice to test attitudes among teachers who are becoming increasingly more sophisticated in this area. Nevertheless, the developers of the scale may feel well pleased with their efforts as may those who pressed for the legislative changes in Victoria, Australia to enshrine the rights of all children to receive regular education.

ENDNOTE

Note 1. Catholic Education Office, Warragul, Victoria, personal communication.

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