

**Quality Indicators in Special Education:  
A Comparative Study of the Attitudes of Special Educators  
in Singapore and the United States of America**

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The term quality in special education has been used vaguely and interchangeably with other terms such as best practice (Peters and Heron, 1993) and most promising practices (Meyer, Eichinger and Park-Lee, 1987). It is used to describe any one or combination of a process, an outcome, or a set of implicit values.

Researchers concerned with quality processes have coined the term Total Quality Education (TQE). Text books about TQE are numerous (e.g., Schmoker & Wilson, 1993; English & Hill, 1994) and journal articles abound in both regular education (e.g., Macchia, 1992; Schmoker & Wilson, 1993) and in special education (e.g., Audette & Algozzine, 1992). The major thrust of TQE approaches is continual improvement through measuring client satisfaction. TQE is usually limited to consumer satisfaction and is not directly related to programme outcomes. Although parents are not the only stakeholders, it is usually they who are designated as consumers in special education programmes. Westling (1997) provides an example of how the parents of young children with mental disabilities may be involved in establishing priorities and in indicating their level of satisfaction with the special education programmes being provided for their children.

But students themselves may have different ideas about what constitutes quality. Gill (1987, 1994) argues that, wherever possible, service providers should deal directly with the person with a disability. She discusses disability culture as a civil rights movement and comments that, unlike members of groups based on race, ethnicity or religion, persons with disabilities are usually born and raised in a majority culture. When parents make qualitative decisions for them, they do so as members of the majority culture.

Another approach to quality is to identify indicators of quality as being present or absent in education programs. Peters and Heron (1993) recommend a range of types of indicators including the consensus of expert opinion, the support of empirical and theoretical models, the production of desired outcomes, and the creation of a values base (e.g., treatments to be humane and non-intrusive).

Meyer et al. (1987) identified 123 program quality indicators from a literature search and through polling of nationally recognized experts in severe disabilities. These indicators were then rated by representatives of experts in various aspects of special education, including researchers, special education administrators, and parents involved in advocacy. Factor analysis extracted five factors: (1) Integration, (2) Professional Practices and Home-School Instructional Strategies, (3) Staff Development, (4) Data-Based Instruction, and (5) Criterion of Ultimate Functioning.

Renaut (1994) adapted Meyer et al.'s (1987) program-quality indicators to survey the teachers of all students receiving additional special education support or funding within an educational region in New Zealand. Some students were included in regular classes while others were in special schools or in special classes within regular schools. Renaut reduced the 123 indicators to 80 by eliminating the lower-ranked indicators, and by extracting some that were less relevant because of differences in educational systems or culture. The wording of some indicators was adjusted to reflect systemic differences. The survey attempted to find relationships between the number of indicators present and other variables such as the type of educational provision, level of support, etc. The only significant difference concerned teacher education: those teachers with special education training were more likely to have more quality indicators present in their programs.

The present study, performed in Singapore, was designed to identify whether special education teachers perceived quality in the same way as the expert panel used by Meyer et al. (1987). There are a number of important differences between special education in Singapore and in the United States of America:

- \* There is no special education legislation in Singapore.

- \* Most special education in Singapore is delivered in segregated special schools by quasi-government or welfare organizations.

- \* The only special education in Singapore's regular schools is in the form of remedial assistance for children with reading or language difficulties (Quah & Jones, 1997).

- \* A few children with physical disabilities without learning difficulties are included in regular schools.

- \* Nomenclature for persons with disabilities in Singapore uses terms such as educationally subnormal, intellectually disabled, spastic, or deaf, to refer to persons with disabilities.

- \* Special education teachers in Singapore are first employed without qualifications other than school-leaving exam-passes, although some have degrees. They are then sent for specialist teacher training while also teaching full-time.

## Method

**Subjects:** The subjects were 85 students enrolled in special education courses at the National Institute of Education, Singapore's sole teacher-education facility being a faculty of Nanyang Technological University. Forty-six of the subjects were enrolled in a two-year course, the Diploma in Special Education (DISE). In Singapore, students and teachers are usually scheduled for either a morning shift or an afternoon shift. Twenty subjects (in their second year of the DISE) taught at school in the mornings and took their teacher-training courses in the afternoons. Another 26 subjects (in their first year of the DISE) took their teacher-training courses in the mornings and taught at school in the afternoons. The remaining 39 subjects were all enrolled in a two-year course, the Certificate in Special Education (CISE). The CISE requires a lower secondary-school qualification than does the DISE. These subjects were employed at school during the day and attended their courses between 4 p.m. and 7 p.m. Sixteen of these subjects were in their first year of the CISE and 23 were in their second year.

**Instrument and Procedure:** The 80 items identified by Renaut (1994) were randomly arranged on a survey form and given to the subjects during a class in one of their courses. Each item was listed with a box in which the subjects were asked to write a number between 20 and zero, depending on whether they thought the item was a very important consideration, an important consideration, undecided, not an important consideration, not a consideration. The more important the consideration, the higher the number should be with 10 representing the undecided midpoint. This scale was identical to that used by Meyer et al. (1987). Subjects were guaranteed anonymity. The survey forms were identified as to each subject's course plan (CISE or DISE) and year group thus creating sub-samples. The survey was administered in the tenth week of the first semester of the academic year.

**Data analysis:** Mean ratings were computed for each indicator within each sub-sample (year and course groups) to provide a measure of the extent to which each indicator was regarded as being important. Spearman Rank Order correlations were calculated to indicate the amount of agreement on the relative importance of each indicator, between different samples and sub-samples of subjects. Two-tailed t-tests of significant difference in mean ratings between the different groups were also calculated.

## Results

The sample of Singapore subjects selected mean ratings over almost twice the range (9.30 to 18.29) selected by Meyer et al.'s (1987) sample (12.92 to 18.29). Nevertheless, there was

substantial agreement between the two groups. Both groups rated as factors most important, "Professional Practices and Home-School" and the "Criterion of Ultimate Functioning," with "Data-Based Instruction" rated as secondary in importance.

There was a difference of fewer than 1.0 points between the ratings of the two samples for 48 of the 80 indicators. A difference of more than two rating-points occurred for 13 indicators, five of which were indicators for the factor Integration. Two indicators had over a five-point difference. The indicator claiming that a "student attends a school appropriate for his or her chronological age" was rated at 9.30 by the Singapore sample, as opposed to 16.00 by Meyer et al.'s group. The indicator suggesting that "non-handicapped students of the same age would most likely feel that their privacy and dignity were being respected in this class" was rated 11.23 by the Singapore teachers, as opposed to 16.71 by Meyer et al.'s sample.

The degree of agreement between different samples and sub-samples of subjects on the specific indicators within the various factors was also measured using a Spearman Rank Order correlation. These correlations are shown in Table 1.

Table 1

Spearman Rank Order Correlations Between the Average Ratings for All Indicators Combined and for Each Factor			
Correlations between:	Singapore & Meyer et al.	Year 1 & Year 2	CISE & DISE
<b>Factor</b>			
All indicators combined	0.63	0.81	0.73
Integration	0.74	0.85	0.78
Professional Practices and Home-School	0.44	0.71	0.72
Staff Development	0.43	0.89	0.03
Data-Based Instruction	0.26	-0.04	-0.26
Criterion of Ultimate Functioning	0.24	0.43	0.86

Despite agreement between the sample of Singapore teachers and the Meyer et al. sample on which factors were most important (reported above), there was less agreement on the relative importance of specific indicators. This was especially so for the factors "Data-Based Instruction" and "Criterion of Ultimate Functioning." However, an inspection of the average ratings and ranks of the individual items revealed that, although some items were ranked differently, the difference in average ratings was often quite small. For example, the sample of Singapore teachers ranked the indicator that claimed "the programme philosophy emphasizes preparation for living in the least-restrictive adult environment" as seventh of eight indicators in the factor "Data-Based Instruction" with an average rating of 16.97. Meyer et al.'s sample ranked it first of eight with an average rating of 18.03 or just 1.06 higher.

Table 1 also reports correlations between the year-group and course-group sub-samples of the Singapore teachers. There is reasonably strong agreement between the sub-samples on all indicators, except for "Data-Based Instruction" where negative correlations occur. Inspection of the raw data indicated that there were also large differences between the groups in average ratings of

some indicators.

There were some significant differences in ratings between the different sub-samples of the Singapore special-education teachers. These are reported in Table 2 which shows some differences between the CISE and DISE groups. The DISE is a higher-level and more substantial course than the CISE, and includes a broader discussion of conceptual issues and a stronger emphasis on assessment, including the use of data to make decisions. The data may also reflect the different roles of these groups of subjects. Candidates for the DISE were more likely to be decision makers and programme developers than were candidates for the CISE whose role was sometimes a teaching aide rather than a teacher.

Table 2

Mean Ratings of Quality Factors  
Reported as Year One Versus Year Two  
and as CISE Versus DISE

Factor	Year Comparison:		Course comparison:	
	Year 1	Year 2	CISE	DISE
Integration	13.04	14.74*	13.35	14.37
Professional Practices and Home-School	16.30	17.67**	16.54	17.37*
Staff Development	14.02	16.80***	15.24	15.58
Data-based Instruction	15.61	17.04**	15.56	16.99**
Criterion of Ultimate Functioning	16.98	18.82**	17.95	17.88
All factors combined	15.40	17.08***	15.79	16.64**

Note: \*p < 0.05 \*\*p < 0.01 \*\*\*p < 0.001

The differences between the year-groups are more statistically significant than differences between the courses. As the survey was taken during the first semester of each course, the difference was most probably due to changes in Year Two students as a consequence of having attended their course for a longer period of time. Year One subjects had only had exposure to ten weeks of courses whereas Year Two subjects were into their third semester of courses. Year Two subjects rated all but five indicators more highly than did Year One subjects suggesting that they had become more aware of the importance of these indicators during their training.

The greatest differences occurred when Year Two subjects rated indicators more highly than did Year One subjects. However, average ratings of only three indicators were more than four points apart between year groups. The greatest difference (5.06) was for the indicator that claimed "paraprofessional staff are required to receive formal training relevant to the disability areas served," which received an average rating of 18.93 from Year Two subjects versus 13.88 from Year One subjects. Year Two subjects provided an average rating of 15.54 for the indicator recommending that "there is weekly communication between home and school, including information about skill generalization to non-school environments" whereas Year One subjects gave it an average rating of 14.49 (a difference of 4.81). An increasing awareness of disabled persons' rights to leisure and the opportunity to make choices is reflected in the difference (4.49) between the average rating of Year Two subjects (18.80) and

Year One subjects (14.31) for the indicator claiming that "each IEP includes objectives to develop leisure activity skills reflecting the learner's personal preferences."

## Discussion

Despite large differences in the way special education is structured and administered - in legislation, in teacher education, and in value issues such as nomenclature and inclusion - special educators in Singapore and in the USA are substantially in agreement about what constitutes quality in a special education program. There was consensus between special educators in the two countries in areas that reflect specific teaching practices as measured by the factors "Professional Practices and Home-School," "Data-Based Instruction," and "Criterion of Ultimate Functioning." The areas where there was less agreement were "Integration" and "Staff Development." This is an expected result as integration rarely occurs in Singapore whereas it has been a dominant issue for over three decades in the USA.

The consensus between teachers of these two countries suggests that, despite systemic and cultural differences in special education in Singapore and the USA, professionals and others closely involved in special education do agree on what constitutes quality in special education programmes. This is particularly the case for indicators that describe specific teaching practices. There may be several reasons for this agreement, but one of these is probably the training that teachers receive. Although the results provide evidence that special education teachers in Singapore differ in their ranking of quality indicators according to how much training they have received, the training of special education teachers in Singapore does draw heavily on texts and journals from other countries, especially the USA.

Some cautions must be exercised in interpreting this conclusion. First, only 80 of the 123 indicators that Meyer et. al. (1987) identified were used in this survey. While their sample ranked the excluded indicators relatively lowly, the Singapore teachers may well have ranked them differently although there is no evidence to suggest that this would be the case. Secondly, the Singapore teachers only responded to a predetermined set of indicators that had been selected by an expert group in the USA. It is entirely possible that the Singapore teachers may have also identified other indicators, particularly indicators that encompass Singapore's cultures.

Despite these cautions, the results show remarkable congruence between teachers of different systems, cultures, and training as regards their perceptions of what constitutes quality in special education programs. Nevertheless, it is too early to suggest that quality in special education, or aspects of it, may be universal. This requires a broader range of cross-cultural research along with research across different areas and disciplines in special education.

Quality indicators offer special educators the opportunity to use a base formed by consensus-opinion to evaluate their programs. This is not to say that all programs should be the same nor that the needs of all students can better be met by a program with a higher number of quality indicators than another program. Instead, the indicators may be most useful as a starting point that suggests what might be important components of a program. It is then up to special educators to make decisions based on these indicators and on the needs of the students for whom they are responsible.

While many of these decisions should be based on indicators of outcome effectiveness, Meyer et al.'s list also includes indicators that describe the philosophy and values of high-quality programs. For example, many indicators concern the theme of inclusion. This theme reflects current values about special education practice. However, the effectiveness and value of inclusive programmes for some students remains hotly debated (e.g., Repp, 1996). It is the task of special educators to acknowledge that many quality indicators emphasize inclusion and also to then evaluate the needs of their students, consulting with them and others, and thoughtfully developing IEPs and programs as a consequence.

The prospect that special educators in different systems and cultures can agree on

indicators of quality in special education programs suggests that researchers in diverse systems and cultures may collaborate using a common base of indicators while identifying differences that may inform one another. For example, students receiving special education in Singapore are likely to be placed in segregated situations while their counterparts in the USA may be included in regular education. If both sets of students are taught in programs that share other quality indicators, it would be possible to make comparisons between the students to evaluate how the areas of difference (i.e., inclusion or exclusion from regular education) affect variables such as learning outcomes and the attitudes of students.

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