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ABSTRACT

This study used Q-methodology, which describes subjective opinions through measured techniques, to evaluate the attitudes held by practitioners (19 special educators and 14 regular educators) as a result of the changing focus of special education from pull-out categorical programs to an integration service model. Q-methodology enabled the identification of distinct views of special education and the significant variables characterizing those views. Subjects were administered a Q-sort instrument consisting of 36 statements representing teacher perceptions regarding education models, special education students, and methodologies. Analysis produced three factors or views concerning placement of students with special needs. The "avant-garde" view supports integration of students in special education and the integration of regular and special education resources and personnel. The "old guard" view supports the use of categorical labels and pull-out categorical programs. Finally, the "status quo" advocates generally support mainstreaming but only on a part-time basis with continuing support of a pull-out program. The study concludes that most regular and special education teachers are receptive to and ready for a progressive integration trend. (DB)

Classroom Integration of Special Education Students: Using Q Methodology to Determine Teacher Attitudes

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A call for excellence in public schools was set forth by the ambitious, bold National Education Goals and America 2000. This spirit of change, intended to bring about important school reform and the advancement of strategies to improve education, will include special education. An essential part of these goals is to ensure that students are able to reach their fullest potential "based on the assumption that: (1) all children can learn and benefit from their education; and (2) the educational community must work to improve the learning opportunities for all children" Department of Education Memorandum (cited in Slenkovich, 1991, p. 514). The reform themes in special education focus on the placement of students with disabilities, and a stated priority in the mission of the Division of Innovation and Development in the U.S. Department of Education and Office of Special Education Programs is educating students with mild disabilities in general education classrooms (Kaufman, Kameenui, Birman, & Danielson, 1990).

The movement of the National Education Goals and America 2000 toward reform and change will take time and patience, and the goal of implementing a quality integrated education has been deemed possible and ultimately worthwhile (Berres & Knoblock, 1987). A significant factor that will

impact upon the success or failure of the integration effort is teacher attitudes. Examination of teacher attitudes toward integration is warranted.

PURPOSE

The purpose of this study was to determine the attitudes held by practitioners as a result of the changing focus of special education from pull-out categorical programs to an integration service model. Through Q-methodology, which describes subjective opinions or attitudes through measured techniques, the researcher sought to identify distinct views of special education and the significant variables characterizing those views and to identify whether there were appreciable differences between views on placement of students with disabilities held by special education and regular education teachers. The professionals used for the study were special education teachers and regular education teachers. Opinions were measured by a thirty-six item Q-Sort response to placements of students in special education, regular education, and integrated settings.

REVIEW OF RESEARCH

A central issue of special education for more than two decades has been the appropriate placement of students with educational disabilities in regular classes. "Least restrictive environment," "regular education initiative,"

and "mainstreaming" are terms used to describe the action of placing students in the regular education environment. In the 1980's, reform in special education was referred to as integration or full inclusion meaning that all students were educated in regular education and regular classes (Stainback & Stainback, 1990). Reynolds and Birch (1982) defined this movement as "the whole history of education for students (labeled special) can be told in terms of one steady trend that can be described as progressive inclusion" (p.27). Inclusive schooling provides equity and excellence to all students and offers students with disabilities a quality education in a "normal" school setting (Schattman & Benay, 1992). The time for the merger of special education and regular education into one unified system that educates all students in the mainstream and meets the unique needs of every student has arrived because the instructional needs of students do not justify a dual system which is inefficient (Stainback, Stainback, & Bunch, 1984). The current political climate supports the unified system of integration as well.

This unified system of special education and regular education is known as integration or full inclusion. Integration programs necessitate a change in teacher roles and includes any assistance and support the students or their teachers may need for the students to be successful in the mainstream. The regular teacher provides direct instruction and consults with other team members, while the

special education teacher no longer provides direct instruction to a small number of students in a "pull-out" classroom but is co-teaching with regular class teachers (Schattman & Benay, 1992).

Several researchers express concern over the mixed results of the effectiveness of consultation and integration programs. Results from the studies could be used for discussions pro and con for both integrated programs or resource programs (Deno, Maruyama, Espin, & Cohen, 1990; Schulte, Osborne, & McKinney, 1990; Zigmond & Baker, 1990). The studies also indicate concern about teacher perceptions and teacher effectiveness. Deno et al. (1990) found that teachers in schools implementing integrated programs viewed their schools more positively but found their perception of effectiveness was not a predictor of student achievement. Teachers in the study conducted by Schulte et al. (1990) saw consultation and direct service models combined as being the most effective, and the teachers perceptions were reflected in the overall academic gains of the students. Zigmond and Baker (1990) indicated that full-time mainstreaming or integration would not be a successful alternative to pull-out programs if the mainstream instructional program was not changed to make it more effective for all students. West and Cannon (1988) stated that one important variable in determining the success of consultation are the skills and competencies of both the special and regular education teacher.

An important variable that strongly influences the success of integrated programs is teacher attitudes. Berres & Knoblock (1987) point out "that the most significant factor accelerating or hindering integration efforts is the attitude of staff about students rather than the abilities of the students" (p. 292). They further indicate that a progressive direction for special education is a process that requires commitment to an ideal and to the process integrating education. As noted by Horne (1985), "Teacher attitudes toward mainstreamed children seem to be influenced by perceptions of their competency to work with these children, availability of support services, previous training or experiences, or their own educational philosophy" (p. 100-101).

The present research used a representation of current concepts and issues in the literature to examine the attitudes of special and regular classroom teachers. A Q-sort was used to determine the consensus of opinions.

METHOD

Subjects

Fifty-two teachers in two metropolitan school districts were invited to participate in the study. Thirty-three teachers responded to the invitation giving a 66% response rate. The nineteen special education respondents included teachers in the following areas: learning disabilities,

severely emotionally disturbed, trainable mentally handicapped, and deaf education. The fourteen regular education respondents taught math, social studies, and science. Seventy-five of the respondents taught in grades 10-12, eighteen percent in grades 7-9, and less than twelve percent in grades 1-3 and 4-6. Eleven respondents were male and twenty-two were female (see Figure 1).

Instrument

The Q-Sort instrument, was adapted from "A Survey of Teacher's Opinions Relative to Mainstreaming Special Needs Children" (Larrivee & Cook, 1979). Key issues and concepts in the literature were used to revise and update the items. The resultant thirty-six statements comprised the theoretically based measure which was representative of the three major categories of education models: regular, pull-out categorical, and integration. The sort items reflected teacher perceptions of special education students as well as methodology preferences. The domains of teacher competencies and perceptions and student needs and behaviors were included.

Procedure

Q-methodology (1952) is a technique that represents Q-sort responses of individuals for the purpose of

Figure 1

Factor A Respondents' Characteristics

Respondent Number	Factor Loading	Gender	Teach	Years Taught
4	.76	F	Spe. Ed.	1- 5
5	.63	F	Spe. Ed.	6-10
6	.73	F	Spe. Ed.	6-10
8	.51	F	Spe. Ed.	11-15
9	.61	F	Spe. Ed.	11-15
10	.75	F	Spe. Ed.	11-15
11	.82	F	Spe. Ed.	16-20
12	.46	F	Spe. Ed.	16-20
13	.80	F	Spe. Ed.	11-15
14	.72	F	Spe. Ed.	1- 5
15	.89	F	Spe. Ed.	6-10
19	.54	M	Reg. Ed.	16-20
20	.49	M	Reg. Ed.	6-10
22	.51	M	Reg. Ed.	1- 5
24	.56	M	Reg. Ed.	1- 5
26	.60	M	Reg. Ed.	1- 5
32	.57	F	Spe. Ed.	11-15
33	.65	F	Reg. Ed.	11-15

Factor B Respondents' Characteristics

Respondent Number	Factor Loading	Gender	Teach	Years Taught
1	-.55	F	Spe. Ed.	21-25
2	-.82	F	Spe. Ed.	6-10
3	-.82	F	Spe. Ed.	1- 5
21	-.55	F	Reg. Ed.	21-25
29	-.67	M	Reg. Ed.	16-20
30	-.53	F	Reg. Ed.	1- 5

Factor C Respondents' Characteristics

Respondent Number	Factor Loading	Gender	Teach	Years Taught
16	-.74	F	Spe. Ed.	1- 5
17	-.54	F	Spe. Ed.	6-10
18	-.59	F	Spe. Ed.	1- 5
25	-.46	M	Reg. Ed.	11-15
31	-.49	M	Reg. Ed.	1- 5

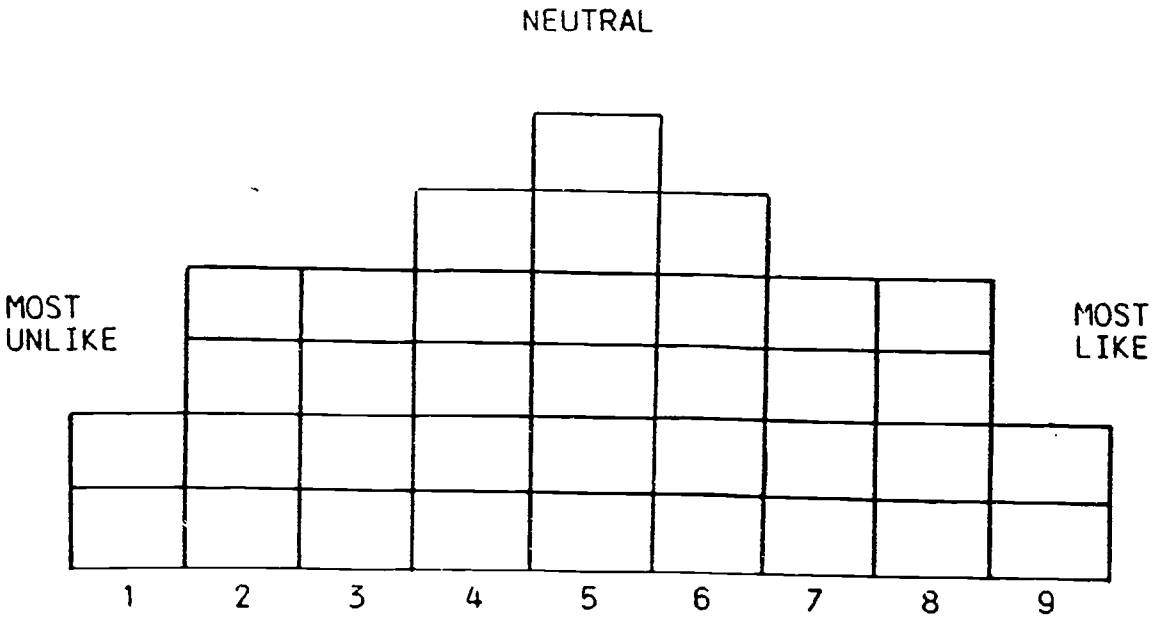
identifying patterns of opinion about a specified topic. It is a theory-based design that permits a scientific approach to the study of subjective ideas and is useful in studying the individual (Brown, 1980). The basic technique of Q-methodology is Q-sorting which is an alternative means for rank ordering of items. The individuals sort statements physically by moving them about and placing them in piles which represent a valuative criterion, which in this study was most like and most unlike.

The Q-sort packages were delivered to special education teachers in each building who in turn disseminated the packages to their colleagues. Included in the package was a cover letter, written instructions for completion of the Q-sort, 36 Q-sort statements on separate cards, a formboard for distributing the cards, a formboard for recording the scores (Figure 2) and a checklist of demographics. Written instructions to the participant requested a rank ordering, structured sort of the thirty-six statements into a continuum from the most like to the most unlike; the codes from the cards were recorded on the nine pile formboard to represent the continuum of the statements reflecting the respondents beliefs.

Data Analysis

The sorts were coded and entered in Factor Analysis Programs for Q technique: p.c.q. (Stricklin, 1990) for factor analysis. The p.c.q. program calculated the

Figure 2



correlation matrix. The reflection was automatically performed by the program, and three factors were selected for the varimax rotation. Teachers who sorted in a similar way were viewed as a common type. The factors that resulted represent points of view. McKeown and Thomas (1988) state that "the association of each respondent with each point of view is indicated by the magnitude of his or her loading on that factor" (p.13). Through examining and contrasting the sorting behavior of each type, the researcher was able to examine the differing attitudes of educational placements of students with special needs held by the subjects. individual sorts, analyzed the correlation matrix, rotated the factors, and sorted with significant loadings, and produced Q arrays for each factor. A three factor analysis resulted. Twenty-nine of the thirty-three sorts loaded significantly on one of the three factors. One respondent had a confounded sort and three were not significant. These four sorts were eliminated from the factor interpretations. The subjects produced 29 usable sorts.

Consensus opinions are opinions on which all three groups agree, and five of the thirty-six statements in this sort emerged as consensual. The greatest difference between pairs of Z-scores for each of the consensual items did not exceed 1.5 nor were they more than one pile apart in the factor array among the three factors (see Table 1). Item 14 was a positive consensus statement while item 21 was a

Table 1

Consensus Items and
Average Z-scores

Item	Description	Factor Array			Average Z-scores
		A	B	C	
14	Sp. ed. teachers should share their expertise with regular teachers.	+3	+3	+2	1.141
21	Special students are dysfunctional and should be separated from other students.	-4	-3	-3	-1.533
26	Special teachers share in support and responsibility with regular teachers.	+1	+1	+1	0.560
31	Special students should be fully integrated into the school environment.	-1	-2	-1	-0.658
32	Special students function successfully in the regular environment.	+1	+1	0	0.294

negative consensus, and three, 26, 31, and 32, achieved homogeneity of support as neutral or irrelevant.

FACTOR INTERPRETATIONS

Analysis of the thirty-three Q-sorts using the p.c.q. program produced three factors or views concerning placement of students with special needs. Interpretation of the factors was based on the array position of the extreme statements at both ends of the continuum (Appendix A). The three factor solution accounted for 51% of the total variance among the sorts: Factor A accounted for 27%; Factor B, 13%; and Factor C, 11%. Interpretation of attitudes is based primarily upon the array of opinion statements for each factor or group.

The three factors represented by Tables 2, 4, and 6 indicate the Q-sort items to which the respondents scored highest positive as most like their beliefs and highest negative as most unlike their beliefs. The statements that have low factor scores are those with neutral responses.

Factor A: The Avant-garde

Eighteen sorts had significant loadings in Factor A. Teachers in Factor A took a position clearly in support of integration of students in special education (see Table 2). This factor represents a profile of those respondents who

Table 2

Synopsis of Q Factor A

A. Profile Data

Item Number	Factor Scores	Brief Description
25	1.952	All need new approaches
8	1.721	Students fall cracks
14	1.392	Sp. ed. shares expertise
36	1.316	Sp. services for all
30	1.252	Integration = team teach
4	1.228	Adapt instruction for all
29	1.153	Unified system of ed.
34	0.894	All need individualized
17	0.769	Sp. active in curriculum
33	0.642	Integration beneficial
20	0.559	Sp. ed.= different method
7	0.480	Reg. challenge sp student
26	0.448	Sp. share responsibility
32	0.377	Sp. students succeed reg.
10	0.325	Sp. students sep-by-step
1	0.304	Teach. want high achiever
9	0.133	Sp. stud. need patience
16	0.121	Sp. teach. better provide
3	-0.085	Refer learning problems
27	-0.111	Integration = changes
12	-0.166	Sp. stud. isolated
24	-0.255	Sp. classes negative
31	-0.306	Sp. stud. integrated
15	-0.534	Sp. lower expectations
18	-0.576	Sp. duplicates curriculum
6	-0.585	Reg. ask for consultation
5	-0.674	Reg. shares expertise
28	-0.866	Integration watered dowm
35	-0.905	Reg. class appropriate
23	-1.090	Labels EMR, LD, ED
19	-1.115	Labels: individual serv.
13	-1.217	Sp. prog. do not achieve
11	-1.333	Sp. students disruptive
22	-1.573	Labels improve instruct.
2	-1.585	Trained for differences
21	-2.092	Sp. student dysfunctional

favor integration. They see that neither regular education or special education can meet the needs of all the students. They emphasize that the integration of personnel and resources needs to occur along with the integration of students. They understand that students with special needs are more like than unlike regular education students and that all students benefit from individualized instruction. The Avant-garde display commitment to the ideal that all students have the right to participate together in education and that all students needs must be met.

Table 3 gives particular emphasis to the differences in the opinions of the practitioners in the placement of students with disabilities. The Avant-garde made distinguishingly different judgements in 4 of the 36 items. They recognize as a primary concern the need of new approaches. Two interesting items that suggest the label "Avant-garde" are that regular education and special education should merge into a unified system of regular education to meet the unique needs of all students and that special education teachers need to take a more active role in curriculum decisions for all students.

Factor B: The Old Guard

The item array of this factor is of interest. Six teachers emerged in Factor B, including three special education and three regular education teachers. This is a

Table 3

Distinguishing Items and
Average Z-scores
for Factor A

Item	Description	Factor Array			Average Z-scores
		A	B	C	
9	Sp. students require more patience from the teacher than regular students.	0	+4	+3	1.210
17	Sp. ed. teachers need to take a more active role in curriculum decisions for all students.	+2	-1	-2	-0.534
25	New approaches need to be explored to meet the needs of all students.	+4	+1	+1	1.000
29	Reg. ed. and sp. ed. should merge into a unified system of reg. ed. to meet the unique needs of all students.	+3	-2	-1	-0.915
21.	Special students are dysfunctional and should be separated from other students.	-4	-3	-3	-1.533

profile defined primarily by responses to the items on the need for labels and the belief that special education teachers can more effectively and appropriately teach students with disabilities (see Table 4). This factor reflected the view of pull-out categorical programs. They also believe that there are certain students who need individualized programs tailored made to their unique needs and characteristics and that special education should be a privilege only provided to "special" students. They believe that there are two different sets of curriculum, one for special education and one for regular education. The Old Guard strongly denied the idea that special education teachers have lower expectations for their students.

The "Old Guard" label for Factor B comes from their strong rejection that the most appropriate educational setting for all students is in the regular class. Table 5 shows further differences between this factor and the other two factors.

Factor C: Status Quo Advocates

Five teachers, three special education and two regular education teachers comprise Factor C, labeled Status Quo Advocates. More strongly than any other factor, Factor C endorsed the idea that regular classrooms challenge students in special education academic growth and that most teachers prefer students who are high achievers (see Table 6). They believe that mainstreaming has a positive effect but that it

Table 4

Synopsis of Q Factor B

A. Profile Data

Item Number	Factor Scores	Brief Description
16	2.178	Sp. teach. better provide
9	1.902	Sp. stud. need patience
8	1.607	Students fall cracks
14	1.190	Sp. ed. shares expertise
20	1.157	Sp. ed.= different method
3	0.853	Refer learning problems
19	0.826	Labels: individual serv.
22	0.739	Labels improve instruct.
27	0.666	Integration = changes
1	0.656	Teach. want high achiever
25	0.619	All need new approaches
26	0.619	Sp. share responsibility
23	0.498	Labels EMR, LD, ED
36	0.447	Sp. services for all
32	0.272	Sp. students succeed reg.
18	0.198	Sp. duplicates curriculum
6	0.129	Reg. ask for consultation
30	0.101	Integration = team teach
34	0.100	All need individualized
7	0.074	Reg. challenge sp student
4	0.034	Adapt instruction for all
17	-0.149	Sp. active in curriculum
24	-0.380	Sp. classes negative
10	-0.454	Sp. students step-by-step
2	-0.515	Trained for differences
11	-0.678	Sp. students disruptive
33	-0.689	Integration beneficial
5	-0.917	Reg. shares expertise
31	-1.190	Sp. stud. integrated
29	-1.253	Unified system of ed.
12	-1.267	Sp. stud. isolated
21	-1.311	Sp. student dysfunctional
28	-1.338	Integration watered down
35	-1.347	Reg. class appropriate
13	-1.539	Sp. prog. do not achieve
15	-1.842	Sp. lower expectations

Table 5

Distinguishing Items and
Average Z-scores
for Factor B

Item	Description	Factor Array			Average Z-scores
		A	B	C	
3	Most teachers refer students with learning problems to specialists.	0	+3	-2	-0.603
12	Special students become socially isolated by regular students.	0	-3	0	-0.482
15	Sp. ed. teachers have lower expectations for their students.	-1	-4	0	-0.825
19	Students can only get individual services by labeling them.	-3	+2	-3	-0.937
22	Labeling students leads to improvement of instruction.	-3	+2	-1	-0.987
33	The integration of special students into regular classes is beneficial for regular students.	+2	-2	+3	-0.834

Table 6

Synopsis of Q Factor C

A. Profile Data

Item Number	Factor Scores	Brief Description
7	1.758	Reg. challenge sp student
20	1.705	Sp. ed.= different method
1	1.660	Teach. want high achiever
9	1.595	Sp. stud. need patience
28	1.265	Integration watered down
33	1.172	Integration beneficial
30	0.912	Integration = team teach
14	0.842	Sp. ed. shares expertise
16	0.813	Sp. teach. better provide
10	0.801	Sp. students step-by-step
26	0.613	Sp. share responsibility
24	0.557	Sp. classes negative
25	0.443	All need new approaches
36	0.442	Sp. services for all
4	0.278	Adapt instruction for all
5	0.107	Reg. shares expertise
15	0.100	Sp. lower expectations
12	0.013	Sp. stud. isolated
23	0.112	Labels EMR, LD, ED
32	-0.233	Sp. students succeed reg.
8	-0.250	Students fall cracks
11	-0.278	Sp. students disruptive
29	-0.341	Unified system of ed.
31	-0.479	Sp. stud. integrated
27	-0.571	Integration = changes
22	-0.649	Labels improve instruct.
6	-0.684	Reg. ask for consultation
17	-0.685	Sp. active in curriculum
3	-0.873	Refer learning problems
13	-1.057	Sp. prog. do not achieve
21	-1.198	Sp. student dysfunctional
2	-1.205	Trained for differences
19	-1.246	Labels: individual serv.
18	-1.578	Sp. duplicates curriculum
34	-1.644	All need individualized
35	-1.990	Reg. classes appropriate

should only be part-time because students still need the support of a pull-out program. Factor C also strongly endorsed the idea that students in special education need different instructional methods and that the curriculum of regular education must be greatly modified for these students. It is their belief that the classification process of labeling should depend on how well it meets its purpose. They also believe education should be provided in the least restrictive setting.

The Factor C position is clearly that of mainstreaming, thus leading to the label, Status Quo Advocate. The discrepant items for this factor (see Table 7) presents the belief that not all students need individualized instruction and that students with disabilities are challenged in the mainstream.

DISCUSSION

Because the Q-sort allows subjects to place items that are important to them or which are beyond their experience in stacks in the neutral piles of the q distribution, this method was particularly suited for this study which wanted to accurately reproduce teachers' views in a manner consistent with his/her experience (Stephen, 1985). In this study three factors emerged pertaining to placement of special education students in differing educational programs. In most cases one factor differed substantially

Table 7

Distinguishing Items and
Average Z-scores
for Factor C

Item	Description	Factor Array			Average Z-scores
		A	B	C	
7	Regular classroom challenge special student' academic growth.	+1	0	+4	0.770
8	Many students "fall through the cracks" of the educational system.	+4	+3	0	-1.192
28	Curriculum becomes 'watered down" when special students are integrated in regular classes.	-2	-3	+3	-1.156
34	All students need individualized instruction, not just a select few.	+2	0	-4	-0.879

from the attitudes found in the other two factors. For instance, only Factor A strongly believed that mew approaches need to be explored to meet the needs of all students and only Factor C believed that regular classrooms challenge the academic growth of students in special education.

The evidence in this study suggests that most regular and special education teachers appear to be receptive to and ready for the progressive integration trend and the move toward a merger of special education and regular education to whatever degree it is possible. It is also clear that teachers who are proponents of integration strongly advocate collaboration and/or team teaching indicating that resources and personnel need to be integrated as well. The results of this study would give support to the argument that teachers are receptive and optimistic about the integration of students in special education into regular classrooms and that a move away from the labeling of students is needed.

Further research can aid in achieving excellence in education for all students in integrated classes. Research can assist in the development of quality collaboration and team teaching procedures and techniques that will strengthen the effectiveness of the instruction received by all students in the integrated classroom.

Appendix A

Statements of Opinion about Educational Placement of Students in Special Education

	Factors	A	B	C
		Array Positions		
	Statements			
1.	Most teachers prefer students who are high achievers.	0	+2	+3
2.	Most teachers are trained to accommodate a broad range of student learning differences.	-4	-1	-3
3.	Most teachers refer students with learning problems to specialists.	0	+3	-2
4.	It is every teacher's responsibility to meet all students' needs by adapting instruction.	+3	0	+1
5.	Regular education teachers commonly share their expertise with special education teachers.	-2	-2	0
6.	Most teachers ask for consultation on students' learning problems when needed.	-1	0	-2
7.	Regular classrooms challenge special students' academic growth.	+1	0	+4
8.	Many students "fall through the cracks" of the educational system.	+4	+3	0
9.	Special students require more patience from the teacher than regular students.	0	+4	+3
10.	Special students need to be given instructions step by step.	+1	-1	+2
11.	Disruptive special students should never be placed in regular	-3	-1	-1

education classes.

12.	Special students become socially isolated by regular students.	0	-3	0
13.	Sp. ed. programs do not achieve desired outcomes for students.	-3	-4	-2
14.	Sp. ed. teachers should share their expertise with regular teachers.	+3	+3	+2
15.	Sp. ed. teachers have lower expectations for their students.	-1	-4	0
16.	Sp. ed. teachers are better able to provide appropriate programs to special students.	0	+4	+2
17.	Sp. ed. teachers need to take a more active role in curriculum decisions for all students.	+2	-1	-2
18.	Sp. ed. curriculum duplicates the content of reg. ed. curriculum.	-1	0	-3
19.	Students can only get individual services by labeling them.	-3	+2	-3
20.	Special students need different instructional methods.	+1	+3	+4
21.	Special students are	-4	-3	-3

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