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ABSTRACT A revised form of the Scale of Children's Attitudes Toward Handicaps (SCATE), which provides a breakdown of attitudes toward specific disabilities, was administered to 332 children in grades 2 through 6. The SCATE was shown to be reliable. The ranking of most positive attitudes to least was: nonhandicapped, learning disabled, hearing impaired, visually impaired, physically handicapped, and mentally retarded. Differences in rankings across grades were significant only for the visually impaired and learning disability categories, with fourth grade lowest for each. Other results included that females scored significantly more positively for all categories except learning disabilities. (The scale is appended.) (CL)

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**Assessments of Rural Elementary Students'
 Attitudes Toward the Handicapped**

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Presented to:

**Council for Exceptional Children, 60th Annual International Convention
 Houston, Texas**

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The Scale of Children's Attitudes Toward Handicaps (SCATE) was originally designed to be one of the very few attitudes-toward-handicaps instruments for use with elementary school children.

The importance of this type of instrument is related to a continuing emphasis on "mainstreaming," or integrating handicapped students into regular grade classrooms. Such an instrument would have value both for making decisions about feelings of other children prior to integrating a child into a classroom, and also for evaluating the effects of such integration. Attitude is only one of several variables that might relate to the handicapped child's acceptability in the classroom, but it is an important one.

The SCATE differs from other attitude scales in that it provides a breakdown of attitudes toward different handicaps, while other instruments provide for reactions to only one exceptionality (such as mental retardation) or a general term ("handicap") with no further definition of this term. The SCATE also provides a breakdown of type of attitude rather than more general responses used by some other scales.

The exceptionalities presented on the SCATE include physically handicapped, hearing impaired, visually impaired, mildly mentally handicapped, learning disabled, plus a non-handicapped example. However, neither the term "handicap" nor any exceptionality label is used. Instead, each exceptionality is presented by a line drawing figure and another figure representing a non-handicapped individual. For each depiction, there is a short narrative description of the stimulus figure. Then, subjects are to indicate the way they think the non-handicapped figure might react to the handicapped one.

The specific items are regarded as "behavioral intention" indicators of attitude. It should be noted that some writers, such as Fishbein, do regard "behavioral intention" as too narrow and not really indicators of attitude per

se). The three types of behavioral intention statements included are: friendship (willingness to do close, friendship-type things); social distance (willingness to be together as part of a social group); and subordinate-superordination (willingness to respect someone in a position of authority over one's self). Subjects are to respond to two items of each type of behavioral intention. One type of item would be that the non-handicapped figure "would," "might," or "would not" make a positive overture to the handicapped figure. The other is, if the handicapped figure made a similar overture, the non-handicapped figure "would," "might," or "would not" respond in a positive way.

An original version of the SCATE was prepared in 1979. Although some significant data was collected on that instrument, and face validity was indicated (see Hagan, 1981), there was some justification for revising the instrument. An attempt was made, in the present version, to alter the form of the items both to ease administration and to obtain greater reliability.

During October-November the revised version was administered in one small town elementary school in west central Indiana. Subjects included 332 subjects in grades 2-6, and there were 176 males and 156 females. Tables presenting specific results are appended.

Results and Conclusions

The SCATE was shown to be a reliable instrument for assessing attitudes toward handicaps. Split-half reliability was .83 (Cronbach's $\alpha = .86$) and test-retest was .67 ($\alpha = .79$). This is viewed as quite acceptable for an attitude-assessment instrument.

Mean total score was 85.10 (possible score=108). Thus, overall, responses were positive. There were total differences by grade, however, with the following order from most to least positive: grade 6,5,2,3,4. Therefore, in this sample, children in grade 2 began with more positive attitudes and children in grade 6 had the most positive attitudes. One could conjecture that a given child might begin school with a positive attitude then lose some of that positiveness through grade 4, but then regain a more positive attitude--bearing out the "fourth grade effect" found in other studies.

In terms of attitudes toward particular handicaps, generally the ranking from most positive to least, was: non-handicapped, learning disabled, hearing impaired, visually impaired, physically handicapped, and mentally retarded. However; second and third grade students placed physically handicapped last, and fourth grade students put visually impaired last. Differences in rankings across grades were statistically significant only for the visually impaired and L.D. categories, with fourth grade being lowest for each.

For attitude types, mean rating for friendship was 23.81, for social distance 23.71, and for subordination-superordination 22.21 (sig. 0.001). The subordination-superordination type was lower for each grade level. The "fourth grade effect" (lower scores) was again evident, although differences were not statistically significant for social distance.

Significant differences by grade were not found on items relating to whether the non-handicapped child would initiate an action, but were found on items of the non-handicapped figure's response to an action initiated by the handicapped child.

Overall, significant differences (0.009) by sex were found, with females scoring more positively. A significant difference was found for all handicap categories except L.D., and significant differences were also found by attitude type.

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Appendix A: Tables of Results

Table I. Mean Scores for Total Scores (possible score=108)

<u>Grade</u>	<u>N</u>	<u>Mean</u>	<u>sd</u>
2	52	86.29	10.65
3	56	84.55	12.42
4	73	81.21	8.57
5	81	86.53	11.21
6	70	87.20	10.73
Total	332	85.10	10.88

ANOVA for differences among grades: $F=3.09$, $sig.=.01$

Table II. Mean Scores for Physically Handicapped Subscale (possible score=18)

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	13.33	1.79	
3	13.30	1.95	
4	13.34	1.89	
5	14.27	2.18	
6	14.20	2.08	
Total	13.74	2.04	$F=4.29$, $sig.=.002$

Table III. Mean Scores for Hearing Impaired Subscale

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	13.96	2.63	
3	13.96	2.42	
4	13.62	2.18	
5	14.37	2.13	
6	14.61	2.30	
Total	14.11	2.31	$F=2.05$, $sig.=.09$

Table IV. Mean Scores for Visually Impaired Subscale

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	14.52	2.62	
3	13.71	3.07	
4	12.82	2.39	
5	14.09	2.44	
6	14.16	2.43	
Total	13.82	2.63	$F=4.25$, $sig.=.002$

Table V. Mean Scores for Mentally Retarded Subscale

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	13.94	2.74	
3	13.91	2.78	
4	12.85	2.37	
5	13.12	2.97	
6	13.81	2.82	
Total	13.47	2.77	F=2.27, sig.=.06

Table VI. Mean Scores for Learning Disabled Subscale

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	14.63	2.61	
3	14.57	2.70	
4	13.81	2.32	
5	14.99	2.32	
6	14.60	2.43	F=3.02, sig.=.02

Table VII. Mean Scores for Non-Handicapped Subscale

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	15.90	1.92	
3	15.09	2.36	
4	14.77	2.09	
5	15.69	2.26	
6	15.40	2.09	
Total	15.36	2.18	F=2.92, sig.=.02

Table VIII. Means for Handicap Items Only--Excluding Non-Handicapped (possible score=90)

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	70.38	9.92	
3	69.46	10.60	
4	66.44	7.80	
5	70.84	9.74	
6	71.80	9.25	
Total	69.74	9.57	F=3.14, sig.=.01

Table IX. Means for Friendship Regrouping (possible score=30)

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	23.83	3.63	
3	23.36	3.81	
4	22.92	3.23	
5	24.51	3.44	
6	24.33	3.13	
Total	23.91	3.46	F=2.72, Sig.=.03

Table X. Means for Social Distance Regrouping

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	24.02	3.71	
3	23.84	4.28	
4	22.66	3.01	
5	23.90	3.69	
6	24.33	3.45	
Total	23.71	3.64	F=2.23, Sig.=.06

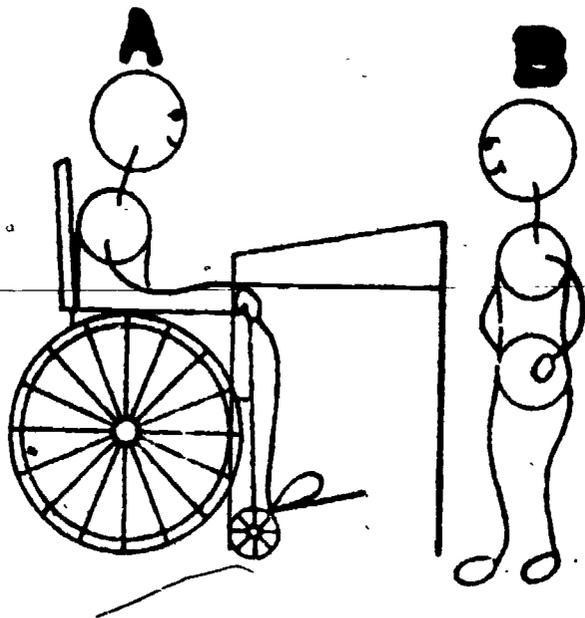
Table XI. Means for Subordination-Superordination Regrouping

<u>Grade</u>	<u>Mean</u>	<u>sd</u>	
2	22.54	4.36	
3	22.27	3.83	
4	20.86	3.33	
5	22.43	4.02	
6	23.14	3.90	
Total	22.21	3.93	F=3.37, sig.=.01

Table XII. SCATE Score Differences by Sex

<u>Category</u>	<u>M</u>	<u>F</u>	<u>Sig.</u>
Physically Handicapped	13.46	14.05	.01
Hearing Impaired	13.86	14.40	.04
Visually Impaired	13.44	14.24	.005
Mentally Retarded	12.99	14.00	.001
Learning Disabled	14.43	14.80	.16
Non-Handicapped	15.30	15.43	.59
School Distance	23.14	24.27	.002
Friendship	23.41	24.27	.02
Subordination-Superordination	21.64	22.86	.005
Total	83.77	86.73	.009

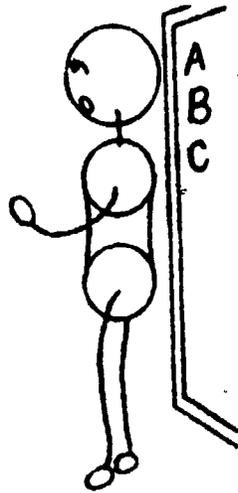
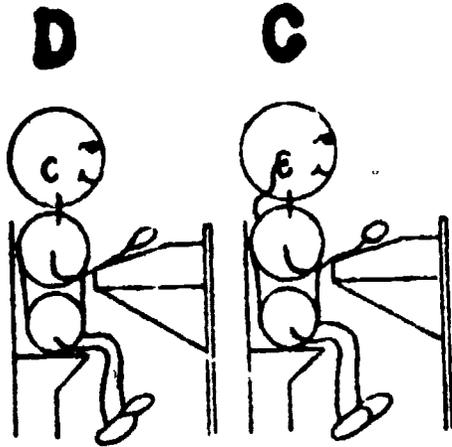
Appendix B: Scale of Children's Attitude Toward Exceptionalities



I. Child A has to use a wheelchair to get around in school. Sometimes this child comes to school late. It takes this child more time to get to class than the rest of the children.

For each question below, there are three things that child B might be saying to child A, and three things that child A might say to child B. In each statement, circle the "X" indicating one thing that that child might say or do.

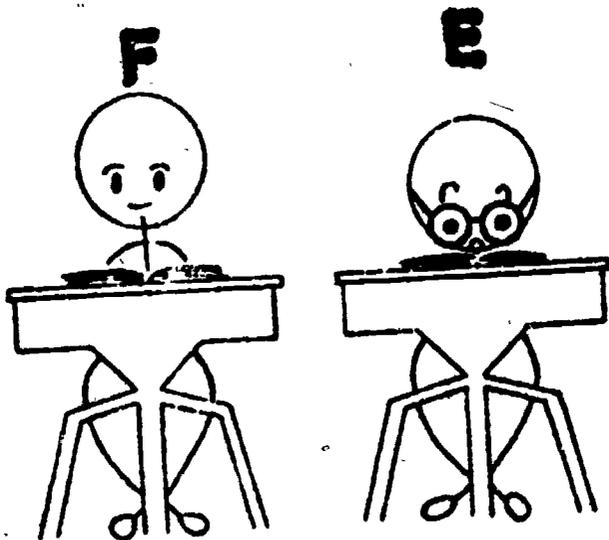
- | | Would | Might | Would Not | | |
|--|-------------------------------------|-------------------------------------|-------------------------------------|---|-----------------------------|
| 1. Child B | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ask child A to join a club. | |
| 2. Child B | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ask child A to be in charge of the class money. | |
| 3. Child B | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | ask child A to share lunches today. | |
| 4. Child A asks child B to join a club. | Child B | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | join the club. |
| 5. Child A is in charge of class money for a trip. Child A tells child B it is his job to collect the money. | Child B | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | collect the money. |
| 6. Child A asks child B to share lunches. | Child B | <input type="checkbox"/> | <input checked="" type="checkbox"/> | <input type="checkbox"/> | share lunches with child A. |



II. Child C sits right in front of the class to hear the teacher. This child has trouble hearing and has to wear a hearing aid. Sometimes child C does not hear other kids talking.

For each question below, there are three things that child D might be saying to child C, and three things that child C might say to child D. In each statement, circle the "X" indicating one thing that that child might say or do.

- | | Would | Might | Would Not | |
|--|---|-------|-----------|--|
| 1. Child D | <input checked="" type="checkbox"/> | X | X | ask child C to join the scout troop. |
| 2. Child D | <input checked="" type="checkbox"/> | X | X | ask child C to eat lunch together at the same table. |
| 3. Child D | <input checked="" type="checkbox"/> | X | X | ask child C to be the captain of the softball team. |
| 4. Child C asks child D to join the scouts. | Child D <input checked="" type="checkbox"/> | X | X | join the scouts. |
| 5. Child C asks child D to eat lunch together at the same table. | Child D <input checked="" type="checkbox"/> | X | X | eat at the same table with child C. |
| 6. Child C is the captain of the ball team. Child C tells child D to handle the ball in a different way. | Child D <input checked="" type="checkbox"/> | X | X | change the way the ball is handled. |

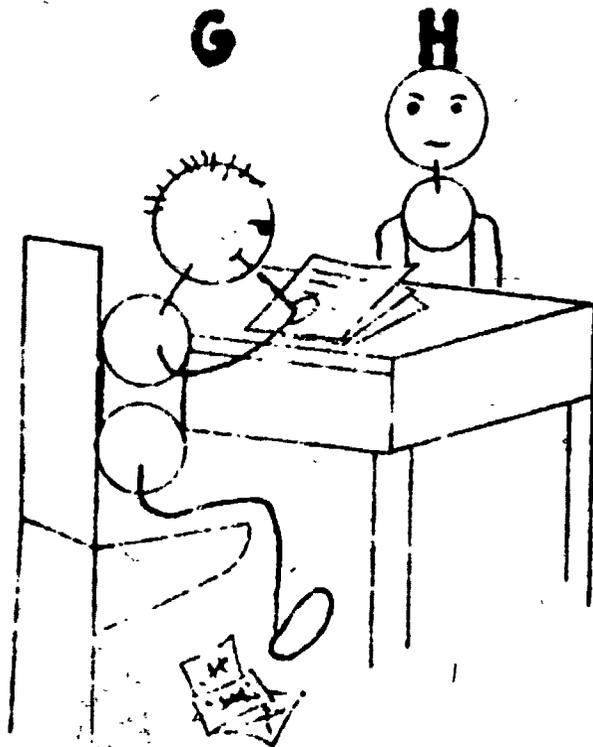


III. Child E wears glasses that are very thick. Child E needs help getting around school because this child can't see very well. Child E sometimes uses a special machine in the back of the room that helps this child see better to read.

For each question below, there are three things that child F might be saying to child E, and three things that child E might say to child F. In each statement, circle the "X" indicating one thing that that child might say or do.

- | | Would | Might | Would Not | |
|------------|-------------------------------------|--------------------------|--------------------------|---|
| 1. Child F | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ask child E to play a game together. |
| 2. Child F | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ask child E to go to the movies with a group of other children. |
| 3. Child F | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ask child E to be the leader of a game. |

- | | Would | Might | Would Not | |
|---|-------------------------------------|--------------------------|--------------------------|----------------------------------|
| 4. Child E asks child F to play a game together. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | play a game with child E. |
| 5. Child E asks child F to go to the movies with a group of other children. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | go to the movies with child E. |
| 6. Child E is the leader of a game. Child E tells child F not to take a turn until child E says to. | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | wait to take a turn in the game. |

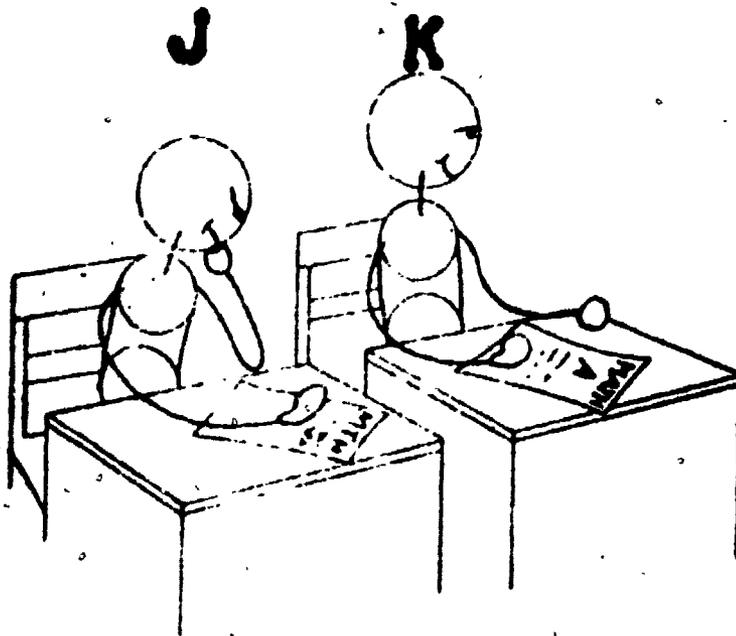


IV. Child G is only in this class for part of the day. This child usually is at a special room in the school. Child G has a very hard time doing school work and doesn't read as well as other kids. Some children say the special room child G goes to is for kids who can't learn.

For each question below, there are three things that child H might be saying to child G, and three things that child G might say to child H. For each statement, circle the "X" indicating one thing that that child might say or do.

- | | Would | Might | Would Not | |
|------------|----------------------------------|-----------------------|-----------------------|---|
| 1. Child H | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | ask child G to join a sports team. |
| 2. Child H | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | ask child G to be the captain of the volleyball team. |
| 3. Child H | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | ask child G to come visit child H at home. |

- | | | | | | |
|--|---------|----------------------------------|-----------------------|-----------------------|--|
| 4. Child G asks child H to play on the same team. | Child H | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | play on the same team. |
| 5. Child G is the captain of the volleyball team. Child G tells child H to continue practicing throwing the ball over the net. | Child H | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | continue practicing throwing the ball. |
| 6. Child G asks child H to come to visit child G at home. | Child H | <input checked="" type="radio"/> | <input type="radio"/> | <input type="radio"/> | visit child G at home. |

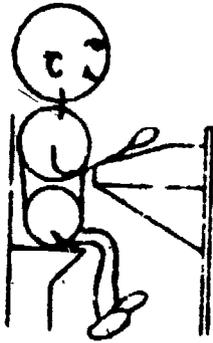
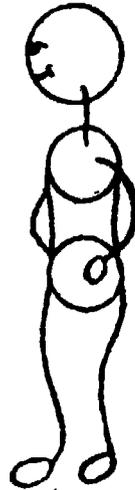


V. Child J answers a lot of questions in class. The child is one of the best students in the class in reading but has lots of trouble with math. Child J is in the lowest group in math. Child J also is very slow in writing.

For each question below, there are three things that child K might be saying to child J, and three things that child J might say to child K. For each statement, circle the "X" indicating one thing that that child might say or do.

- | | Would | Might | Would Not | |
|------------|-------------------------------------|--------------------------|--------------------------|---|
| 1. Child K | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | invite child J to a birthday party. |
| 2. Child K | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ask child J to be the class safety patrol. |
| 3. Child K | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | ask child J to go to the park with a group of children. |

- | | | | | | |
|---|---------|-------------------------------------|--------------------------|--------------------------|---------------------------------------|
| 4. Child J invites child K to a birthday party. | Child K | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | go to the birthday party. |
| 5. Child J is the class safety patrol. Child J tells child K to stop behind the white lines before crossing the street. | Child K | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | stop behind the line before crossing. |
| 6. Child J asks child K to go to the park with a group of children. | Child K | <input checked="" type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | go to the park. |

L**M**

VI. Child L is a good reader and is also good in arithmetic. Child L gets good grades in most classes. Other children like to have child L on their team when they play a game.

For each question below, there are three things that child M might be saying to child L, and three things that child L might say to child M. In each statement, circle the "X" indicating one thing that that child might say or do.

- | | Would | Might | Would Not | |
|------------|-------------------------------------|-------|-----------|---|
| 1. Child M | <input checked="" type="checkbox"/> | X | X | ask child L to be in a play. |
| 2. Child M | <input checked="" type="checkbox"/> | X | X | ask child L to ride bikes together. |
| 3. Child M | <input checked="" type="checkbox"/> | X | X | ask child L to be the captain of the baseball team. |

- | | | | | | |
|--|---------|-------------------------------------|---|---|-----------------------------|
| 4. Child L asks child M to be in a play. | Child M | <input checked="" type="checkbox"/> | X | X | be in the play. |
| 5. Child L asks child M to ride bikes together. | Child M | <input checked="" type="checkbox"/> | X | X | ride bikes with child L. |
| 6. Child L is the captain of the baseball team. Child L tells child M to practice running the bases. | Child M | <input checked="" type="checkbox"/> | X | X | practice running the bases. |