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011351

Classroom Behavior Inventory, Preschool Form, 1978 Research Edition by Earl S. Schaefer and Marianna Edgerton, 1978.

DESCRIPTION: Developed to allow teachers and day care workers to evaluate the behavior of children in a preschool situation and to contribute to understanding child behavior in group settings.

ADMINISTRATION: Teachers or day care workers complete the rating scale.

SCORING AND INTERPRETATION: A scoring form with 11 scales is used.

TECHNICAL INFORMATION: Technical data are provided in two papers included on the microfiche.

MATERIALS: Inventory (60-item research version) and Scoring Form; Paper; Development of Inventory; List of Publications Reporting Use of the Inventory.

TEST

011351-1

Classroom Behavior Inventory--Preschool Form
Earl S. Schaefer & Marianna Edgerton
Copyright, May 1978

60-Item Research Version

Cover Sheet

Child's Name _____ Sex _____

Teacher's Name _____

School _____

INSTRUCTIONS

Research has shown that teachers and day care workers can provide valid ratings that contribute to understanding of child behavior in group settings. Please describe as accurately as possible the behavior of the child listed above by circling one of the five responses to each item. The information you provide will be most valid and useful if you follow the following instructions.

BASE YOUR RESPONSE UPON YOUR PERSONAL OBSERVATION AND EXPERIENCE.

GIVE A RESPONSE TO EVERY ITEM BASED UPON YOUR BEST ESTIMATE.

DO NOT HESITATE TO USE EXTREME RATINGS WHEN THEY SEEM APPROPRIATE.

DESCRIBE THE CHILD AS COMPARED WITH CHILDREN OF THAT AGE GROUP.
FOR EXAMPLE, YOU WOULD RATE A THREE-YEAR-OLD VERY MUCH LIKE THE
ITEM, "UNDERSTANDS DIFFICULT WORDS" IF HE UNDERSTANDS MORE
DIFFICULT WORDS THAN THE AVERAGE THREE-YEAR-OLD.

Thank you for sharing your observations of child behavior.

Classroom Behavior Inventory--Preschool Form
 Earl S. Schaefer & Marianna Edgerton
 May 1978

Card

(1-4)

ID

(5-7)

Teacher

(8-9)

	Not at All <u>Like</u>	Very Little <u>Like</u>	Some What <u>Like</u>	Much Like	Very Much <u>Like</u>	
1. Is quick to grasp the meaning of what he is told	1	2	3	4	5	(10)
2. Awaits his turn willingly	1	2	3	4	5	
3. Wants my help when it's not really needed	1	2	3	4	5	
4. Works earnestly, doesn't take it lightly	1	2	3	4	5	
5. Laughs and smiles easily and spontaneously	1	2	3	4	5	
6. Tries to get even with a child with whom he is angry	1	2	3	4	5	
7. Does interesting & original things	1	2	3	4	5	
8. Uses long words and sentences for his age	1	2	3	4	5	
9. Has a low, unsteady or uncertain voice when speaking to a teacher or group of children	1	2	3	4	5	
10. Tries not to do or say anything that would hurt another	1	2	3	4	5	
11. Stays with a job until it is finished, even if it is difficult	1	2	3	4	5	
12. Often fails to react to classroom activities	1	2	3	4	5	
13. Does not wait for others to approach him but seeks others out	1	2	3	4	5	
14. Shows curiosity about many things	1	2	3	4	5	
15. Is quickly distracted by noise and activity	1	2	3	4	5	(24)

	<u>Not at All Like</u>	<u>Very Little Like</u>	<u>Some What Like</u>	<u>Much Like</u>	<u>Very Much Like</u>	
16. Tries to do things for himself	1	2	3	4	5	(25)
17. Understands difficult words	1	2	3	4	5	
18. Asks me to do even simple things for him	1	2	3	4	5	
19. Works carefully and does his best	1	2	3	4	5	
20. Likes to talk or socialize with other children	1	2	3	4	5	
21. Grabs what he wants and will fight for it	1	2	3	4	5	
22. Works or plays without needing help	1	2	3	4	5	
23. Uses a large and varied vocabulary for his age	1	2	3	4	5	
24. Tends to withdraw and isolate himself, even when he is supposed to be in a group	1	2	3	4	5	
25. Is agreeable and easy to get along with	1	2	3	4	5	
26. Pays attention to what he is doing and is not easily distracted	1	2	3	4	5	
27. Shows little interest in special events or activities	1	2	3	4	5	
28. Is almost always light-hearted and cheerful	1	2	3	4	5	
29. Uses materials in imaginative ways	1	2	3	4	5	
30. Easily loses interest in what he is doing	1	2	3	4	5	
31. Likes to decide for himself what to do	1	2	3	4	5	
32. Gives a good report of what he has seen or done	1	2	3	4	5	
33. Prefers to be told exactly what to do and to have help getting started	1	2	3	4	5	
34. Attends to the task to be done	1	2	3	4	5	
35. Tries to be with another child or group of children	1	2	3	4	5	(44)

	Not at All Like	Very Little Like	Some What Like	Much Like	Very Much Like	
36. Gets angry quickly when prevented from doing what he wants	1	2	3	4	5	(45)
37. Is busy for long periods of time without attention	1	2	3	4	5	
38. Understands and remembers instructions from the teacher	1	2	3	4	5	
39. Is usually sad, solemn, and serious looking	1	2	3	4	5	
40. Is easy to manage	1	2	3	4	5	
41. Thinks up interesting things to do	1	2	3	4	5	
42. Switches from one activity to another frequently	1	2	3	4	5	
43. Has a good fund of information for a child his age	1	2	3	4	5	
44. Shares toys or materials willingly when asked to	1	2	3	4	5	
45. Wants my help for problems he could solve alone	1	2	3	4	5	
46. Listens carefully and follows instructions	1	2	3	4	5	
47. Remains passive even when presented with an interesting stimulus	1	2	3	4	5	
48. Has lots of ideas for pretend activities	1	2	3	4	5	
49. Is good at repeating instructions from the teacher	1	2	3	4	5	
50. Is uncomfortable with people; would rather not be noticed	1	2	3	4	5	
51. Is slow to anger	1	2	3	4	5	
52. Has a low level of interest and enthusiasm	1	2	3	4	5	
53. Tries to make friends by talking, smiling, or sharing	1	2	3	4	5	
54. Shows strong interest in learning new things	1	2	3	4	5	
55. Forgets what he was doing and goes on to something else on the slightest distraction	1	2	3	4	5	(64)

	<u>Not at All Like</u>	<u>Very Little Like</u>	<u>Some What Like</u>	<u>Much Like</u>	<u>Very Much Like</u>	
56. Likes to go ahead with things on his own	1	2	3	4	5	(65)
57. Gives correct answers to questions from teachers or peers	1	2	3	4	5	
58. Hurts or annoys other children	1	2	3	4	5	
59. Takes initiative in choosing activities	1	2	3	4	5	
60. Quickly learns the rules for a new game or activity	1	2	3	4	5	(69)

Scoring Form
Preschool Behavior Inventory
May 1978

Scales	Items									Total
Verbal Intelligence	1	8	17	23	32	38	43	49	57	60
Introversion		9		24		39		50		
Considerateness	2	10		25		40	44	51		
Dependence	3		18		33		45			
Task Orientation	4	11	19	26	34		46			
Apathy		12		27			47	52		
Extraversion	5	13	20	28	35			53		
Hostility	6		21		36				58	
Creativity/Curiosity	7	14		29		41	48	54		
Distractibility		15		30		42		55		
Independence		16	22	31	37			56	59	

TECHNICAL MANUAL

011351-2

A Method and a Model for Describing Competence and Adjustment:

A Preschool Version of the Classroom Behavior Inventory

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Open Meeting: Committee on Psychological Service

to the Preschool Child

Katherine F. Wardle, Chair.

American Psychological Association Annual Meeting

Toronto, Canada

August 28, 1978

The preparation of this report was supported in part by the Bureau of Education for the Handicapped, U.S. Office of Education, DHEW, Contract Number 300-77-0309. However, the opinions expressed do not necessarily reflect the position or policy of the U.S. Office of Education, and no official endorsement by the U.S. Office of Education should be inferred.

A Method and a Model for Describing Competence and Adjustment:

A Preschool Version of the Classroom Behavior Inventory

Teacher ratings provide a cost-effective method for collecting reliable, stable and valid data on individual differences in adaptive behavior for large samples of school children. That rationale, which is supported by recent reviews of teacher ratings (Spivak and Swift, 1973; Schaefer, in press) has motivated the development of a number of rating methods. However, relatively little work has been done on ratings of children in day care and preschool situations, and the work that has been done has usually been limited to a narrow age span. Often the domain that has been sampled has been limited to social and emotional adjustment with little attention to items that define academic competence (Kohn, 1977). Therefore the goal of this research is to develop a comprehensive teacher rating method and a conceptual model for the description of child behavior in day care and preschool situations. The development of the method was guided by earlier research with a Classroom Behavior Inventory that had isolated major dimensions of intelligence, curiosity/creativity, independence versus dependence, task-orientation versus distractibility, considerateness versus hostility, and extraversion versus introversion in teacher ratings of kindergarten and elementary school children. The conceptual model for adaptive behavior that was developed in that research stressed competence and adjustment but also included concepts for the maladaptive pole of bipolar dimensions of classroom behavior.

Scale Development:

Earlier research with an Infant Behavior Inventory (Schaefer

and Aaronson, 1967) and recent research on the Classroom Behavior Inventory (Schaefer, Aaronson, Edgerton, 1977) provided the basis for the development of a sixty-item, eleven-scale, Preschool Version of the Classroom Behavior Inventory. Teachers of preschool teachers were asked to judge the usefulness of items from earlier versions. Although many items for older children were also applied to younger children, other items were revised and new items were written to describe the behavior of children in day care and preschool settings. A decision was made to develop ten items for each of six hypothesized dimensions of preschool behavior. Because of the importance of intelligence and because items to describe low intelligence have not been developed, ten items were used to describe intelligent behavior. Six positive items and four negative items were developed for each of the other hypothesized bipolar dimensions of curiosity/creativity versus apathy, independence versus dependence, task-orientation versus distractibility, considerateness versus hostility, and extraversion versus introversion.

Data Collection:

Data were collected from teachers in three developmental day care centers near a university campus. Although many of the parents were students, a range of family income levels were represented. The children were equally divided between boys and girls; twenty-one percent were black, and their ages ranged from twenty-six to seventy months, with a mean of forty-seven months. Approximately equal numbers of two-, three-, four-, and five-year-olds were included.

Twenty-three of the twenty-four teachers to whom the study was described chose to participate and were paid \$2.00 for each rating.

Twenty-two teachers who worked in pairs independently described the same seven to nine children listed first on their class roll. Since the goals of the study allowed the children to remain anonymous, code numbers rather than names were used to identify the children to insure confidentiality. Nine of the teachers were college graduates and the others had completed high school. In add'tion many had had extensive preservice and inservice training. Experience in day care ranged from three months to twenty years. Eleven of the twenty-three teachers were black and two were men.

Data Analyses:

Item analyses and analyses of internal consistency reliability were used to determine whether homogeneous scales had been developed. Inter-rater reliabilities were computed to determine whether reliable descriptions of child behavior had been achieved. After computing internal consistency reliabilities and inter-rater reliabilities for the total group, separate analyses were made of children between two and four years and between four and six years. A principal factor analysis for the total group were made to determine whether the hypothesized dimensions of child behavior would emerge for descriptions of children between the ages of two and six years.

Results:

Internal consistency reliabilities computed with Cronbach's alpha that are reported in Table 1 ranged from .72 to .95 with a median of .88 for the total group, with higher internal consistency reliabilities for the ten item-scale of intelligence and for the six-item positive scales than for the four-item negative scales. These relatively good internal consistency reliabilities for the brief scales were supported

Table 1

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Reliability of Scales of Classroom Behavior Inventory - Preschool Form

	No. of Items	Internal Consistency Reliability		Interrater Reliability	
		(N=184)	Cronbach's Alpha	(N=88)	Pearson Correlation
Verbal Intelligence	10	95		62	77
Considerateness	6	89		69	82
Task Orientation	6	94		63	77
Extraversion	6	90		32	48
Creativity/Curiosity	6	91		57	73
Independence	6	83		41	58
Introversion	4	77		59	74
Dependence	4	77		33	50
Apathy	4	72		52	68
Hostility	4	88		71	83
Distractibility	4	82		51	68
Median		88		57	73

Note: Decimal points omitted.

by correlations between items and total scale scores that tended to be uniformly high. The Spearman-Brown corrected inter-rater reliabilities for the total group ranged from .50 to .83 with a median of .73. The Spearman-Brown corrected reliabilities show that combining data from two raters, which is usually possible in day care and preschool situations, yields relatively reliable data on preschool behavior. The separate analyses of internal consistency and inter-rater reliability reported in Table 2 shows that higher reliabilities were obtained for the four to six year age group than for the two to four year group. Perhaps older children have more consistent, stable behavior patterns or the more structured settings in which older children participate contribute to reliable judgements. Since different teachers rated the older and younger children, perhaps differences in teachers contributed to the differences in reliability. This hypothesis is suggested by the finding that less educated teachers had lower inter-rater reliabilities in unreported research on the Infant Behavior Inventory.

The factor analysis reported in Table 3 yielded a major unipolar factor of intelligence, bipolar factors of considerateness versus hostility and extraversion versus introversion, a unipolar factor of task-orientation, and a unipolar factor that included loadings from the scales of dependence, apathy, and distractibility. Thus the positive factors of intelligence and task-orientation and positive poles of bipolar factors of considerateness and extraversion replicate dimensions that have been isolated from school age children. Items that define the scales of curiosity/creativity and independence have loadings on the factors of intelligence and task-orientation and do

Table 2

-6-

Reliability of Scales of Classroom Behavior Inventory - Preschool Form
By Age Groups

	Internal Consistency Reliability		Interrater Reliability			
	Cronbach's Alpha		Pearson Correlation		Spearman Brown Corrected Reliability	
	Ages 2-3 (N=93)	Ages 4-5 (N=91)	Ages 2-3 (N=46)	Ages 4-5 (N=42)	Ages 2-3 (N=46)	Ages 4-5 (N=42)
Verbal Intelligence	96	94	62	77	77	87
Considerateness	80	93	54	77	70	87
Task Orientation	93	95	62	66	77	80
Extraversion	91	87	32	53	48	69
Creativity/Curiosity	91	91	50	69	67	82
Independence	84	82	52	49	68	65
Introversion	81	71	63	52	77	68
Dependence	77	76	42	26	59	41
Apathy	70	75	31	69	47	82
Hostility	78	94	59	76	74	86
Distractibility	78	85	29	64	45	78
Median	81	87	52	66	68	80

Note: Decimal points omitted

Table 3

-7-

Factor Analysis of Classroom Behavior Inventory - Preschool Form
N = 186, 1978

	Factors				
	I	II	III	IV	V
Has a good fund of information for a child his age.	85	10	21	06	-11
Understands difficult words.	81	08	-04	08	-15
Uses long words and sentences for his age.	79	00	10	02	-07
Uses a large and varied vocabulary for his age.	79	05	10	04	-15
Thinks up interesting things to do.	77	11	21	23	-10
Gives correct answers to questions from teachers or peers.	77	20	19	24	-13
Is quick to grasp the meaning of what he is told.	74	25	10	28	-17
Quickly learns the rules for a new game or activity.	74	18	27	33	-01
Gives a good report of what he has seen or done.	73	01	29	22	-03
Uses materials in imaginative ways.	72	06	15	42	-12
Understands and remembers instructions from the teacher.	71	34	20	36	-13
Has lots of ideas for pretend activities.	69	-01	23	10	-15
Takes initiative in choosing activities.	68	-07	23	31	-20
Is good at repeating instructions from the teacher.	67	23	29	25	-04
Does interesting & original things.	65	00	26	40	-15
Shows strong interest in learning new things.	64	22	31	31	-11
Shows curiosity about many things.	61	-07	40	05	-25
Likes to decide for himself what to do.	46	-32	09	15	-22
Likes to go ahead with things on his own.	46	-21	27	41	-18
Is easy to manage.	15	77	25	18	-05
Awaits his turn willingly.	16	75	10	21	-06
Is agreeable and easy to get along with.	15	74	32	27	03
Is slow to anger.	02	71	-04	03	-03
Shares toys willingly when asked to.	23	65	22	19	15
Tries not to do or say anything that would hurt another.	13	58	15	23	-01
Listens carefully and follows instructions.	51	53	14	41	-08
Gets angry quickly when prevented from doing what he wants.	08	-80	02	-02	14
Grabs what he wants and will fight for it.	-02	-79	05	-02	21
Hurts or annoys other children.	-05	-76	-03	-09	05
Tries to get even with a child with whom he is angry.	08	-76	-03	07	21
Is quickly distracted by noise and activity.	-27	-45	-02	-36	31
Likes to talk or socialize with other children.	31	04	79	08	00
Tries to be with another child or group of children.	25	03	77	17	00
Laughs and smiles easily and spontaneously.	12	19	77	23	-07
Tries to make friends by talking, smiling, or sharing.	20	21	77	12	-05
Does not wait for others to approach him but seeks others out.	19	-12	68	-04	-07
Is almost always light-hearted and cheerful.	15	35	54	21	-03
Is usually sad, solemn, and serious looking.	-10	-18	-63	-01	27
Tends to withdraw and isolate himself, even when he is supposed to be in a group.	-08	-16	-60	-10	35
Is uncomfortable with people; would rather not be noticed.	-21	06	-58	21	31
Has a low, unsteady or uncertain voice when speaking to a teacher or group of children.	-18	15	-45	19	43

Factor Analysis of Classroom Behavior Inventory - Preschool Form (cont.)
N = 186, 1978

	Factors				
	I	II	III	IV	V
Stays with a job until it is finished, even if it is difficult.	49	25	04	71	-09
Works carefully and does his best.	39	34	08	61	-20
Works earnestly, doesn't take it lightly.	51	24	03	60	-19
Attends to the task to be done.	55	28	14	60	-09
Keeps busy for long periods of time without attention.	48	29	-07	59	-12
Pays attention to what he is doing and is not easily distracted.	50	33	06	58	-20
Works or plays without needing help.	28	21	21	50	-14
Tries to do things for himself.	36	05	14	49	-33
Wants my help when it's not really needed.	04	-15	-14	-15	67
Prefers to be told exactly what to do and to have help getting started.	-20	06	-14	-08	58
Wants my help for problems he could solve alone.	-26	-17	-09	-29	53
Asks me to do even simple things for him.	-06	-20	-09	-29	51
Easily loses interest in what he is doing.	-31	-21	-18	-38	50
Remains passive even when presented with an interesting stimulus.	-33	00	-22	16	43
Has a low level of interest and enthusiasm.	-43	-05	-35	04	42
Forgets what he was doing and goes on to something else on the slightest distraction.	-46	-32	02	-26	41
Switches from one activity to another frequently.	-27	-34	12	-26	37
Shows little interest in special events or activities.	-31	-21	-34	-12	37
Often fails to react to classroom activities.	-18	-30	-34	-28	34

Factors

- I Intelligence
- II Considerateness vs. Hostility
- III Extraversion vs. Introversion
- IV Task Orientation
- V Dependence, Distractibility, Apathy

Note: Decimals omitted.

not define separate factors. Apparently some adaptive behavior factors emerge as differentiated factors at the preschool level while other factors do not. However the behaviors are well defined by homogeneous scales both at the preschool and elementary school levels. In this study, as well as in earlier comprehensive studies of classroom behavior, the positive dimensions of intelligence, considerateness and extroversion are clearly defined. A factor analysis of scale scores with rotation of the first three factors that had eigenvalues greater than one, isolated three factors that clearly define the areas of academic competence, socialization, and temperament.

The clear definition of a factor of verbal intelligence with high loadings on items that might be interpreted as information, comprehension, vocabulary, and assimilation parallels a factor of verbal intelligence that has been isolated from mental tests during the preschool years (Bayley, 1970). The validity of teacher ratings of verbal intelligence has been supported by an earlier finding of a multiple correlation of .81 between a single rating on the Intelligence scale of the Classroom Behavior Inventory and four brief verbal tests in a study of 200 kindergarten children. The validity of teacher ratings of intelligence supports the validity of teacher ratings of other behaviors for which good criterion variables are not available. Many other studies also support the validity and stability of major dimensions of child behavior during the preschool and school years (Schaefer, In press).

Development of a Conceptual Model for Preschool Adaptation:

Earlier studies of the classroom behavior inventory and the factor analysis for this sample have provided the basis for the development

of the hierarchical conceptual model for adaptive behavior of Figure 1. The concept of classroom adaptation is first divided into academic competence and social adjustment. Academic competence is divided into intelligence and task-orientation with specific scales that have defined those concepts specified below while social adjustment is divided into extraversion and considerateness with specific scales at a lower level of abstraction. Figure 2 then presents a hierarchical model of maladaptive behavior derived from this study that indicates how the different diagnostic categories might be related to major dimensions of classroom behavior. In order to indicate how the different scales and factor dimensions might be integrated in a three-dimensional configuration model for adaptive behavior, Figure 3 presented a model derived from a number of empirical studies (Schaefer, in press) that is supported by a three-dimensional analysis of these data on preschool children.

Discussion:

The high internal consistency reliabilities of brief scales, the relatively high inter-rater reliabilities, and the clear factor structures for teacher ratings of child behavior in day care situations support the usefulness of the preschool version of the Classroom Behavior Inventory. The higher reliabilities for children between four and six years of age as contrasted to children between two and four years of age suggest that older children may have more consistent and stable behavior patterns. Yet the reliabilities for younger children suggest that the method does allow data collection during the period of early development and stabilization as patterns of adaptive behavior. The method provided reliable data on both early patterns of academic

Figure 1

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A HIERARCHICAL MODEL FOR PRESCHOOL ADAPTATION

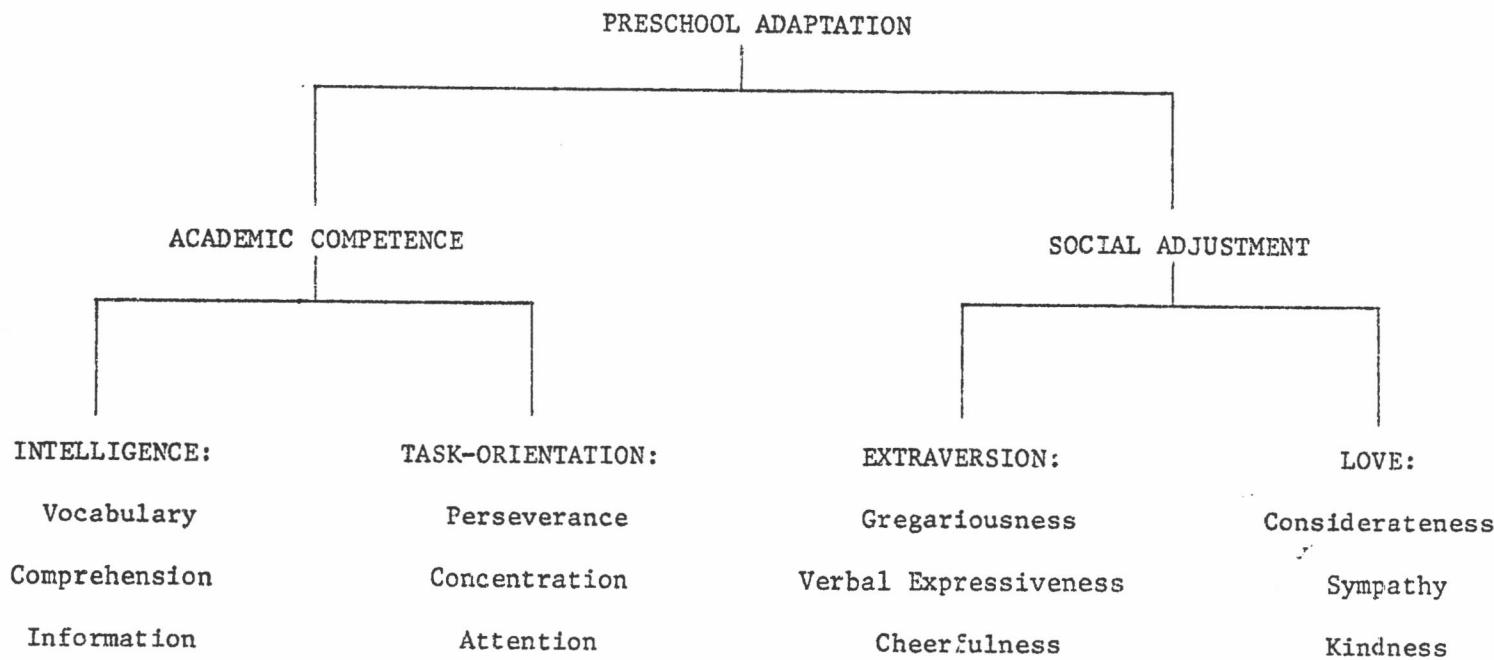


Figure 2

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A HIERARCHICAL MODEL FOR PRESCHOOL MALADAPTATION: RELATIONSHIP TO MAJOR DIAGNOSTIC CATEGORIES

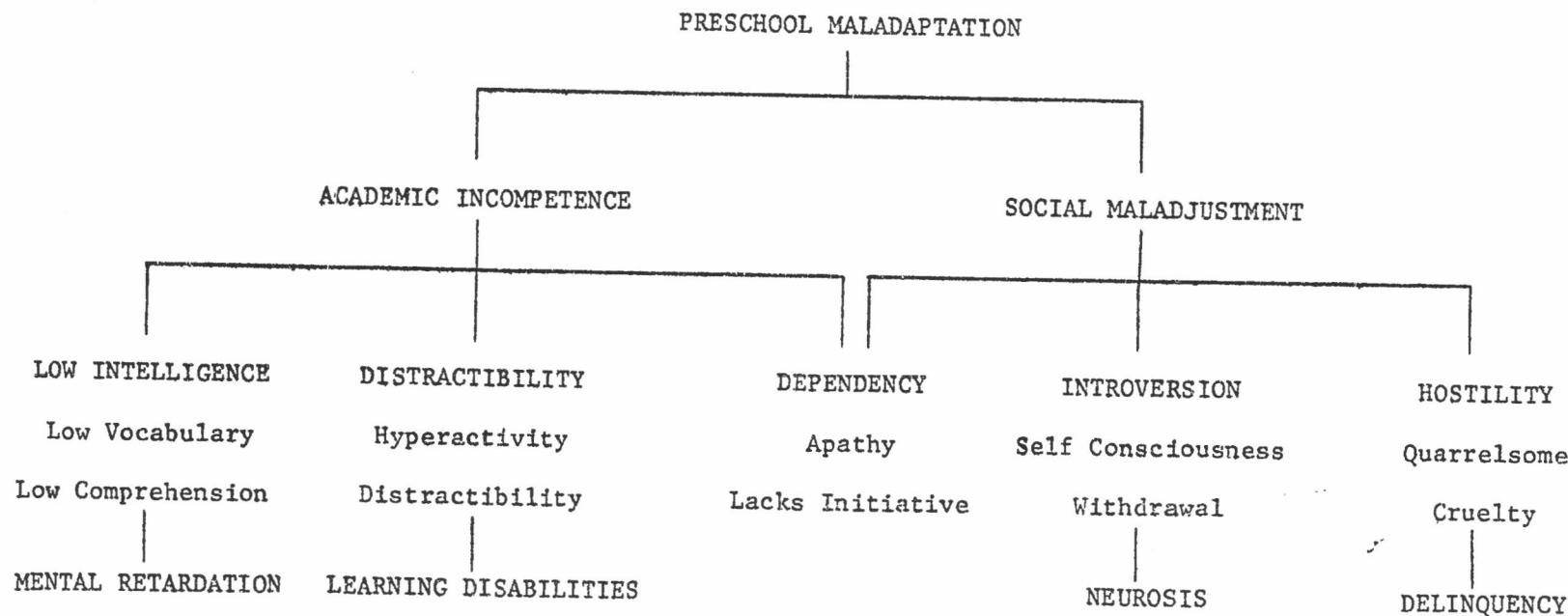
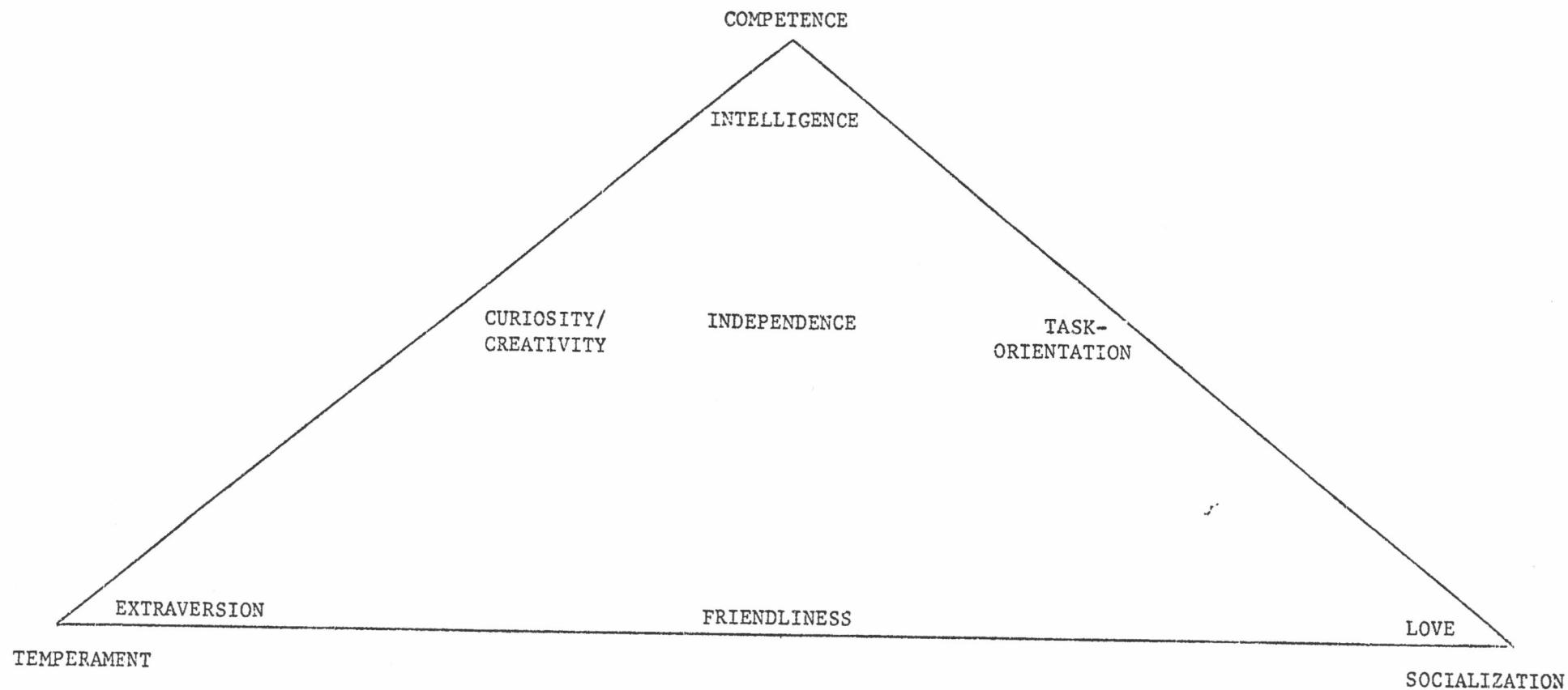


Figure 3

-13-

A CONFIGURATIONAL MODEL FOR DIMENSIONS OF CLASSROOM BEHAVIORS



competence and early patterns of social and emotional adjustment that may predict the child's future school adaptation.

The Preschool Version of the CBI provides a method for collecting valid data on the child's classroom behavior from teachers and day care workers. The hierarchical configurational models provide a conceptualization of adaptive behaviors of competence and adjustment and of maladaptive behaviors that can be identified with major diagnostic categories. The method has been useful in research; may contribute to evaluation, screening, and diagnosis; and may focus professional attention upon adaptive behavior and positive goals for child development.

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Circumplex and Spherical Models for Child School Adjustment and Competence

Earl S. Schaefer and Marianna Edgerton

Abstract

Configurational organizations of child behavior had developed replicated, circumplex models for social and emotional behavior. Factor analyses of two large samples of teacher ratings of kindergarten children tested the hypothesis that an extended domain of social/emotional, conative/motivational, and cognitive/intelligent behaviors would reveal a three-dimensional spherical model. Analyses of items and scales replicated two dimensions--Extraversion versus Introversion and Considerateness versus Hostility--of a circumplex model and added a dimension of Academic Competence with loadings for Task-Orientation, Curiosity/Creativity, and Verbal Intelligence. Plots of the three dimensions generated a spherical model that integrates ratings of affect, conation, and cognition.

Accepted for program of American Psychological Association, New York, New York, August 1982

Circumplex and Spherical Models for Child School Adjustment and Competence

Earl S. Schaefer and Marianna Edgerton

Guttman's (1954) theoretical discussion of configurational models motivated the development of two-dimensional, circumplex models for teacher ratings of the child's social behavior (Schaefer, 1961; Becker and Krug, 1964; Baumrind and Black, 1966). Studies using different concepts, methods, and age groups by Schaefer and Plutchik (1966), Benjamin (1974), Wiggins (1979), and Conte and Plutchik (1981) and reviews of related research (Schaefer, 1971; Wiggins, 1980) have demonstrated the replicability and usefulness of a two-dimensional, circumplex model for interpersonal behavior. However, a more complex configurational model might be identified by sampling a more comprehensive domain that includes conative/motivational and cognitive/intelligent behavior.

Method:

Subjects: For Sample A twenty-eight teachers from eight rural, suburban, and urban schools rated 193 kindergarten children. In Sample B, twelve teachers from the six schools of a small urban community rated 293 children.

Procedure: In Sample A each teacher rated up to eight children, half white and half black, in the spring of the kindergarten year. In Sample B each kindergarten teacher rated all children in the classroom.

The Classroom Behavior Inventory (Schaefer and Edgerton, 1977) was used to collect teacher ratings of child behavior in the classroom. Scales that measure the two major dimensions of the circumplex model for social and emotional behavior (Schaefer, 1971) were supplemented with scales that measure Task-Orientation, Distractibility, Curiosity/Creativity, and Verbal Intelligence. The scales have shown high reliability and validity in predicting school adjustment and achievement (Kohn, 1977; Schaefer and Edgerton, 1979).

Factor analyses of individual items and of scale scores for both samples with principal components analysis and Varimax rotation identified major

dimensions of classroom behavior. Scales and factors were ordered according to Guttman's (1954) order of neighboring. A configurational model was generated from plots of the factor loadings.

Results:

Three replicated factors that are reported in the table include 74 percent of the total variance for Sample A, 79 percent of the total variance for Sample B, and more than 90 percent of the reliable scale variance for both samples. The Varimax rotated factors are reported in Table 1 with the scales and factors organized by Guttman's (1954) order of neighboring. Dimensions of Extraversion versus Introversion and of Considerateness versus Hostility clearly replicate the two major dimensions of the circumplex model for social, emotional, and interpersonal behavior. Scales that had been designed to measure conative and cognitive behavior have significant loadings on the factor of Academic Competence with highest loadings for the scale of Verbal Intelligence. Task-Orientation and Distractibility have significant loadings on both Academic Competence and Considerateness versus Hostility. Curiosity/Creativity has significant loadings on both Academic Competence and Extraversion versus Introversion. Spatial plots of the three dimensions generate a replicated spherical model for child competence and adjustment that integrates affective, conative, and cognitive behavior.

(TABLE ABOUT HERE)

Discussion:

Warr's (1980) criteria for conceptual frameworks--parsimony, internal consistency, heuristic value, quantification, empirical support and replicability--support the utility of the circumplex model for interpersonal behavior and of the spherical model for child behavior in the classroom. Research on the circumplex model suggests that the spherical model would provide a conceptual framework for integration of concepts and measures that describe affect, conation, and cognition in other settings and of other age groups. Concepts and scales of the

Classroom Behavior Inventory and the spherical model might contribute to design of more comprehensive studies and to integration of research on child social adjustment and academic competence.

Table 1

Factor Analyses of Scales of the Classroom Behavior Inventory

Scales	Sample A			Sample B		
	N = 193			N = 293		
	I	II	III	I	II	III
Low Hostility	<u>89</u>	05	02	<u>90</u>	-11	9
Considerateness	<u>83</u>	23	07	<u>78</u>	32	12
Low Distractibility	<u>55</u>	<u>57</u>	15	<u>57</u>	<u>54</u>	10
Task-Orientation	<u>39</u>	<u>79</u>	15	<u>41</u>	<u>76</u>	18
Verbal Intelligence	14	<u>84</u>	33	15	<u>82</u>	21
Curiosity/Creativity	-01	<u>76</u>	<u>52</u>	10	<u>77</u>	<u>44</u>
Low Introversion	-09	17	<u>88</u>	18	29	<u>69</u>
Extraversion	-05	39	<u>82</u>	05	21	<u>94</u>

¹

- I. Considerateness versus Hostility
- II. Academic Competence
- III. Extraversion versus Introversion

Classroom Behavior Inventory

Earl S. Schaefer and Marianna Edgerton

The Classroom Behavior Inventory was initially developed to measure major dimensions of social and emotional behavior of Considerateness versus Hostility and Extroversion versus Introversion (Schaefer, 1961). Subsequent studies developed scales of Task-Orientation versus Distractibility (Schaefer, 1971) and Curiosity/Creativity, Independence versus Dependence, and Verbal Intelligence that define a dimension of academic competence (Schaefer & Edgerton, 1982; Schaefer, Edgerton, & Hunter, 1983). The current version contained 42 items in ten scales. Internal consistency reliabilities for a sample of 294 kindergarten children ranged from .83 to .96 for the six 5-item scales and from .75 to .89 for the four 3-item scales. Test-retest correlations for the same teacher in January and April ranged from .63 to .89 for the ten scales.

Concurrent validity was shown by correlations of CBI scales with corresponding Bipolar Traits Rating scales ranging from .78 to .84. Validity of the Verbal Intelligence scale is supported by correlations ranging from .60 to .72 with mental tests including the TOBE and WPPSI. The scales of Curiosity/Creativity, Independence and Task-Orientation, that have substantial loadings on a factor of academic competence, have correlations with mental test scores ranging from .51 to .62. Learning disabled children are consistently rated low on Task-Orientation, emotionally handicapped children are rated high on Hostility, and educable mentally retarded children are rated low on Verbal Intelligence (McKinney and Forman, 1982). Kohn (1977) has demonstrated correlations between CBI scales and other criteria of social adjustment and academic competence. CBI scales have also shown significant correlations with parent childrearing beliefs and values and with parent demographic characteristics (Schaefer and Edgerton, in Press). Thus the CBI scales has shown substantial reliability and validity in several studies of normal and clinical samples.

SUPPLEMENTARY MATERIAL

DRAFT

Publications Reporting
Use of the Classroom Behavior Inventory

Earl S. Schaefer & Marianna Edgerton

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