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AUTHOR   Barclay, James R.
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ABSTRACT
                The Barclay Classroom Climate Inventory is a
multi-method, multi-trait inventory, derived from self-report, peer
nominations and teacher judgments, offering a description of a
student's characteristics in the classroom group and in grades,
schools and other units. Traits of psychosocial development and
extroversion introversion groupings of scales form multi-method
factors that describe an educational environment in terms of
task-orientation, social interaction, disruptiveness, seclusiveness,
and like dimensions. The inventory consists of: (1) a self-report
section that includes a list of self-competencies, occupations or
skills of possible interest, and a list of possible reinforcers; (2)
a group section of 26 sociometric nominations in areas similar to the
self-report section; and (3) a teacher section of 62 adjectives for
checking those typical of the child. Reliability and validity studies
have been made. The multiple inputs from self, peers and teachers are
integrated via a computer program into a written report and several
tables that describe suspected problems of children. Judgments are
based on factor scores and utilize conditional statements to examine
alternatives. Eight problem areas have been identified: self-concept
deficits, group interaction deficits, self-management deficits,
verbal skill deficits, physical skill deficits, vocational
development deficits, cognitive-motivation deficits, and poor
attitude toward school. The inventory can be used to ascertain the
distinctive characteristics and problems of particular grades and
schools and provide clues to the specific type of intervention
needed. (KM)

Multiple Input Assessment and Preventive Intervention

James   R.   Barclay
University   of   Kentucky

A major problem in implementing new learning strategies in

the schools is that learning is influenced by student, teacher,

curriculum, parental and other environmental factors. The

school psychologist, counselor, teacher or administrative policy-

making group must allocate limited resources to maximize   educa-

tional efforts. This requires evaluating behaviors that relate

not only to achievement, but self-competency, self-management,

group interaction, motivation and other affective and social

variables. If the school is to prevent rather than respond to

problems it should consider evaluation as a routine as well as

important diagnostic function of its program.

The purpose of this paper is to describe an assessment system

that utilizes the child's self-report, his peer group and teacher

expectations, offers a description of his characteristics both

in the classroom group and in grades, schools and other units.

The Barclay Classroom Climate Inventory has been developed

over a period of seven years. It is a multi-method multi-trait

inventory derived from self-report, peer nominations and teacher

judgments. Traits derived from Holland's theory of psycho-

social development (1966) and extroversion-introversion

groupings of scales form multi-method factors that describe

an educational environment in terms of task-orientation, social

interaction, disruptiveness, seclusiveness and like dimensions.
Initially based on testing with two thousand elementary
children, a recent standardization has been completed on nearly
five thousand cases distributed through second to sixth grades,
and including substantial groups of Blacks and Mexican-Americans.
The inventory consists of a self-report section that includes
a list of self-competencies such as "I can run fast." It also
includes a list of occupations or skills in which children may
be interested, a list of possible reinforcers. relating to family,
peer-group and social reinforcers. The group section consists of
26 sociometric nominations in areas similar to the self-report
section. For example children in a class may be asked to
nominate the child who can "run the fastest." The teacher judgments
are derived from 62 adjectives. Those adjectives typical of the
child are checked. Considerable research on typical reliability
and validity questions has been conducted. Test re-test reliability
of the scales is relatively high. Validation studies include
correlation with external criteria, cross-validation with other
instruments such as the 16 P.F. Test, the Kuder, and traditional
sociometric devices. They also include convergent and discriminant
analysis studies (Barclay, 1972).

The unique feature of the inventory is that the multiple
inputs from self, peers and teachers are integrated via a computer
program into a written report and several tables that describe
suspected problems of children. Through the use of experimental,
observational and clinical judgment data, inferences are made
about interactions in children. These judgments are based on
factor scores and utilize conditional "if" statements to examine

alternate possibilities. Eight problem areas have been
identified using the various scales and factors. These are:
(1) self-concept deficits, (2) group interaction deficits,
(3) self-management deficits, (4) verbal skill deficits,
(5) physical skill deficits, (6) vocational development deficits,
(7) cognitive-motivation deficits, and (8) poor attitude towards
school. In addition, teacher expectations can be judged independently
by looking at mean indices calculated from the total number of
positive adjectives versus negative adjectives checked to
describe each individual. The computer also indicates the
percentage of boys, the percentage of girls, and of the total
class who show problems in specific areas. Figures 1 and 2
provide examples of the data output on an individual child and
his class. In this particular instance boy #18 is a sixth grader
who has deficits in self-concept, group interaction skills, verbal
skills, vocational development and attitude towards school.
Although these inferences should not be accepted uncritically,
they are based on the convergence of self, group and teacher
judgments on common factors.

-- insert Figures 1 & 2 about here ---

The utility of the system for evaluation in the elementary
grades has been demonstrated in a number of school districts that
have used the system. For differences between grades, schools
and between districts can be obtained by comparing the frequency
of problems observed.

Recently I have analyzed the output of three school districts
and 143 classrooms (Barclay, 1973). A multivariate analysis of
problems between grades, sexes, and predominant racial groupings
was obtained. Although differences between grades and races

were obtained on cross-sectional rather than longitudinal data,
it would appear that teachers' evaluation of children gradually
declines from the second grade to the fifth grade with a
gradual upswing noted in the sixth grade. This evidence suggests
that the ratio of positive descriptors applied to children by
teachers is much higher in the second grade than in the fifth
grade. At the same time that teacher expectations appear to
decline in favorability, the proportion of cognitive-motivation
deficits increase. Attitude towards school gradually worsens.
Though some progress appears to be evident in group interaction
and self-management problems over the same time span, self-
competency and seclusiveness move in negative directions.

Through the use of discriminant analysis it becomes possible
to ascertain both the distinctive characteristics of schools
and grades within the district, and differences existing
between districts. For example, of the four schools located in
a Southern university city district, one tends to be somewhat
low on teacher judgments and has a high incidence of poor
attitude and self-concept deficits. Another tends to be very well-
controlled, but poorly motivated. Still another possesses
unreasonably high teacher evaluations but much disruptive and
acting-out behavior. A fourth shows marked differences between
boys and girls both in teacher judgments and kinds of problems.
These examples provide some information as to how the inventory
is being used by school districts to ascertain the proportion
of specific problems relating not only to a given individual,
but to classrooms, and grade comparisons between schools.

Effective educational change will have to be focused on both the individual and the classroom. Our experience with the BCCI has led us to recognize some problems that really required such a multiple-needs assessment system for identification. For example, there appear to be distinctive differences that characterize classrooms. The combining of social interaction, personological and teacher expectation data suggests dimensions to learning that approach a temperament-treatment mediation in task-achievement. Moreover, it may well be that what we have called temperament in the past is largely determined by the susceptibility, reproductivity, and motivational processes relating to alternate models in the classroom (Bandura, 1972).

Our research findings have led me to conclude that educational change to be effective will have to be focused on the primary unit of interaction, i.e., the classroom. The diagnostic inferences provided by the present system function as clues. These clues may be compared to medical symptoms. Symptoms of coronary disease or attack exist in a variety of manifestations. They may include chest pains, difficulty in walking up stairs, poor circulation and the like. They are often mediated by excessive smoking, overweight, lack of exercise and so on. When all of these clues are put together with age factors and family history there is a rather good predictive possibility of a heart attack. The diagnosis or predictive judgment can, however, be changed by active intervention.

Specific to the educational environment what this means is that diagnostic clues arrived at from a multiple needs assess-

ment system may suggest differential treatments. If within
a given district, school A tends to show a very low teacher
evaluation and many poor attitudes towards school as well as
a high frequency of behavior management problems, then it may
be relevant to aid this school through a behavior modification
or structured curriculum approach. If school B has many deficits
in self-esteem and group interaction it may be relevant to
develop a curriculum or counseling procedure that accents
the develoOment of self-competency skills and verbal interaction
processes.

In the past we have been all too prone to try a single
new curriculum vehicle for an entire district. Or we may be
persuaded to institute this or that approach. What seems evident
from the literature is that no single set of approaches works
best with all children and teachers. Some children may learn
reading best through a kinesthetic approach. Others through a
visual modality. Still others may do better with an auditory
approach. Probably all can gain something from each approach,
but individuals can profit and accelerate their own learning
by maximizing a specific approach related to their needs and
special capabilities.

The existence of the BCCI system and our efforts to utilize
it in the school setting has led to further conclusions. One
of these is that school personnel need to be trained to think
in preventive terms. Doing this means that teachers, principals,
psychological staff and others need to assign a high priority
to intervention on the basis of clues rather than reconstruction
after the crisis. Another conclusion is that we need to teach

school personnel how to make decisions based on data. Very
often school personnel are overwhelmed with the amount of
information they receive through the BCCI. Though many have
complained about wishing to know about self-concept, group
skills and the like, it is quite evident that when they actually
do have the data in hand, they do not know what to do next.
A third conclusion is that we have found it necessary to
analyze various intervention strategies and order them into
some kind of taxonomy. This taxonomy of prevention has
begun to work quite well in our attempt to retrain teams
of school personnel to think preventively on the basis of
data, problems and strategies.

We have found that strategies of intervention can be broadly
grouped into three categories: (1) information feed-back,
(2) social interaction exercises and opportunities for social
modeling, and (3) environmental manipulation or restructuring.
It would be naive and premature for me to state that we have
worked out a "goodness of fit" relationship between individual
differences, problems and alternate strategies. But we do think
that we are on the way to a researchible paradigm using these
categories.

Our experience in working with schools suggests that many
of the minor problems of individuals can be approached on the
first level, i.e. information feed-back. By this level of
strategies is meant providing information back to the student
(or the teacher if she is the target of change) about how he is
being perceived. This can take the form of reporting back the
BCCI results, audio or video feed-back, test analysis and the
like. A byproduct of this feedback is understanding about the

child's learning style, his interests and motivation. Often
this results in a change of rules, a more flexible learning structure,
the use of a resource center or the like. Though we cannot
posit causal relationships between problems such as group
interaction deficits and self-management problems, often we
observe that intervention with one problem leads to amelioration
of others.

The second level of intervention is often supplementary
to the first and involves the development of social interaction
skills and the use of exemplary models. Here study skills groups,
groups relating to specific social skills, vocational exploration
and the like can be skillfully used to develop both verbal
interaction on a reciprocal level and confidence in problem-
solving. In addition, the use of students as tutors for others
with similar problems, assigned roles in psychodrams, community
and teacher-aide roles and simulation games provide an excellent
opportunity for social reinforcement and social modeling.

The third level is reserved for more severe problems
in that it includes environmental adjustments at school and
at home. This may involve replacement in another group, special
reinforcement and social learning techniques designed to develop
self-control such as carrels, time-out procedures, desensitization
and the like.

Crucial to strategy determination are two further con-
siderations:(1) the number of problems a child has, both as
reported by the BCCI, and (2) the capabilities of the school
resources to deliver the strategies. In the first of these,

it can be noted from Figure 2 that our student # 18 has
a number of problems indicated. Consultation with teacher
and principal may indicate there is low achievement, a poor
home situation or a combination of further problems.
What the learning team decides to do in this instance may
be much more than might be done with another child who
is simply noted as reticent. In addition, what the local
team can do is dependent on resources and skills they
possess. Thus it is often necessary to conduct some
in-service training for school personnel to aid them
in utilizing the resources they have.

From the research and experience I have had with
the development of a computerized approach to assessment,
I think we are witnessing a new technological leap in
education. The computer can provide data on social and
affective variables in a comprehensive and diagnostic
manner. It then makes the problem of working with
individual differences and alternate strategies both a
logical and possible educational alternative. Still more,
it makes the determination of a prevention-intervention
model a real possibility. The humanistic use of the
computer is a key factor to this pending revolution.

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Figure 1
Sample Individual Report

— STUDENT NUMBER 18 IS A BOY IN THE 6 GRADE.

— THE FOLLOWING ARE IMPRESSIONS OF HIS SELF-COMPETENCY SKILLS:

— LOW GLOBAL ESTIMATE OF SELF-COMPETENCY SKILLS. LOW SELF-ESTIMATE OF ARTISTIC-INTELLECTUAL
SKILLS. ABOVE AVERAGE SELF-ESTIMATE OF REALISTIC-MASCULINE SKILLS. LOW SELF-ESTIMATE OF SOCIAL
SKILLS. AVERAGE SELF-ESTIMATE OF ENTERPRISING SKILLS.

— THE FOLLOWING ARE IMPRESSIONS OF HIS KNOWLEDGE OF THE FIELD OF WORK, AS A FUNCTION OF
ACQUAINTANCE WITH THE ENVIRONMENT:

— APPEARS TO EXPRESS AN AVERAGE AWARENESS OF VOCATIONAL ALTERNATIVES IN THE FIELD OF WORK. SHOWS
LITTLE OR NO INTEREST IN MANUAL AND OUTDOOR OCCUPATIONS. SHOWS LITTLE OR NO INTEREST IN SCIENTIFIC,
TECHNICAL, AND INTELLECTUAL-ORIENTED OCCUPATIONS. SHOWS LITTLE OR NO INTEREST IN SOCIAL OCCUPATIONS
CALLING FOR INTERPERSONAL SKILLS. SHOWS AVERAGE INTEREST IN ARTISTIC AND CREATIVE OCCUPATIONS.

— THE FOLLOWING ARE IMPRESSIONS OF HIS PERSONAL AND INTERPERSONAL SKILLS AS JUDGED BY PEERS:

— PERCEIVED GLOBALLY BY PEERS AS POSSESSING FEW PERSONAL OR SOCIAL SKILLS. PERCEIVED BY PEERS AS
POSSESSING SOME ARTISTIC AND INTELLECTUAL SKILLS. PERCEIVED BY PEERS AS LACKING REALISTIC AND
MASCULINE SKILLS. PERCEIVED BY PEERS AS POSSESSING SOME SOCIAL COMPETENCIES AND SKILLS. NOT
PERCEIVED BY PEERS AS MANIPULATORY OR POSSESSING INTERPERSONAL LEADERSHIP SKILLS. PERCEIVED BY PEERS
AS BEING SOMEWHAT RETICENT, SHY, AND WITHDRAWN. IS NOT PERCEIVED BY PEERS AS DISRUPTIVE WITHIN THE
CLASSROOM.

— THE FOLLOWING ARE IMPRESSIONS OF HIS PERSONAL AND SOCIAL ADJUSTMENT AND EFFORT AND MOTIVATION
AS RATED BY THE TEACHER:

— MANIFESTS SOMEWHAT INCONSISTENT PATTERN OF PERSONAL ADJUSTMENT. MANIFESTS OCCASIONAL POOR
SOCIAL ADJUSTMENT. MANIFESTS OCCASIONAL POOR EFFORT AND MOTIVATION.

— SUMMARY:

— THIS BOY IS IN GREAT NEED OF HELP IN THE DEVELOPMENT OF PERSONAL AND INTERPERSONAL SKILLS. THIS
BOY'S BEHAVIOR, BASED ON SELF, PEER AND TEACHER JUDGMENTS DOES NOT APPEAR TO BE VIEWED CONSISTENTLY
AS EITHER EXTROVERTED OR INTROVERTED, CONTROLLED OR IMPULSIVE. HE APPEARS TO MANIFEST A BLEND OF
TEMPERAMENT AND RESPONSE MODES.

— THIS CHILD SHOWS HIGH INTERESTS IN PEER GROUP MALE REINFORCERS AVERAGE INTERESTS IN
SELF-STIMULATING, ESTHETIC, TASK-ORIENTED, FAMILIAL, CONVENTIONAL, PEER GROUP FEMALE REINFORCERS AND
LITTLE OR NO INTEREST IN THE REMAINING REINFORCERS.

— THIS CHILD'S JUDGMENT OF THE SCHOOL ENVIRONMENT IS SOMEWHAT UNFAVORABLE.

— STUDENT NUMBER 18   CLASSIFICATION CODE (85)
SELF-RATED SCALES   GROUP NOMINATION SCALES   VOCATIONAL PREFERENCE SCALES   TEACHER ADJECTIVE SCALES   BEHAVIORAL SCALES

SAI	0-	GAI	2-	REAL	0-	ENTR	0	PA+	0-	SAO	7	MEL	6*	SSR	13	CNV	1
SRM	4	GRM	1-	INT	0-	ARTS	0	SA+	0	EFFO	6	CHL	5*	ESR	14	PRM	3
SSC	1-	GSC	2	SOC	0-	CONT	8*	EFF+	0	TR7	0-	PHL	0	ITR	15	PRF	1
SE	4	GE	1-	CONV	0-	VTOT	17	PAO	6	TR8	19*	SAN	0	FRR	18	CCI	1
STOT	9-	GTOT	6-														

Figure 2
Sample Cumulative Problems Summary

EXPLANATION OF SUMMARY TABLE NO. 2
IN THIS TABLE THERE ARE EIGHT SUSPECTED PROBLEM AREAS. THESE AREAS ARE DERIVED FROM THE TOTAL PATTERN OF SCORES OBTAINED
ON THE INDIVIDUAL STUDENT. THE NUMBER AND PERCENTAGE OF CHILDREN WITH PROBLEMS IN CERTAIN AREAS ARE INDICATED BELOW THE TA...

STUDENT   SELF   GROUP   POSSIBLE TARGET AREAS FOR PROBLEM INTERVENTIONS
AND SEX   CONCEPT SKILLS   SELF-CONTROL VERBAL PHYSICAL VOCATIONAL COGNITIVE ATTITUDE
           SKILLS   SKILLS   SKILLS SKILLS   DEVELOPMENT DEVELOPMENT TOWARD SCHOOL

STUDENT AND SEX	SELF CONCEPT SKILLS	GROUP SKILLS	SELF-CONTROL SKILLS	VERBAL SKILLS	PHYSICAL DEVELOPMENT	VOCATIONAL DEVELOPMENT	COGNITIVE DEVELOPMENT	ATTITUDE TOWARD SCHOOL
1/M						*		
2/F	*							
3/F	*							
4/F			*					
5/M						*		
6/M	*							
7/F				*				
8/M	*							
9/F	*	*			*			
10/F						*		
11/F	*	*	*					*
12/M	*	*			*			*
13/F				*				
14/F							*	
15/M								
16/F	*	*			*	*		*
17/M	*	*			*			
18/M	*		*		*	*		*
19/F								
20/F					*	*		
21/F	*							
22/M	*	*			*	*	**	
23/F								
24/M			*					
25/F								
26/M	*	*			*	*		*

	SELF CONCEPT	GROUP	SELF-CONTROL	VERBAL	PHYSICAL	VOCATIONAL	COGNITIVE	ATTITUDE
MALES	4.	2.	1.	3.				
PCT	36.	18.	9.	27.	0.	27.	9.	45.	5.
FEM.	7.	2.	0.	0.	2.	6.	2.	2.	2.
PCT	47.	13.	0.	13.	40.	13.		13.	13.
GROUP	11.	4.	1.	5.	6.	5.		3.	7.
PCT	42.	15.	4.	19.	23.	19.		12.	27.

SEE PROFILE ANALYSES OF B.C.L. CLASSIFICATIONS IN USER'S MANUAL PP. 59-108. AND
SUMMARY OF STUDENT TARGET SKILLS AND ALTERNATE STRATEGIES P. 111.