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ABSTRACT
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attitude, opinions about course difficulty and other dispositional
variables. Further development of score-adjustment procedures and
research to identify other relevant variables are also indicated.
Information regarding the factor structures of the instruments is
provided. The two instruments used in the study, Attitude Toward
School and Course and Instructor Rating Scale, are included.
(Author/BW)

RELATIONSHIPS AMONG SECONDARY STUDENTS' EVALUATIONS OF

THEIR COURSES AND TEACHERS AND THEIR GENERAL

ATTITUDE TOWARD SCHOOL

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Paper presented at the 1976 meeting of the

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ABSTRACT

To explore the potential relationships among general attitude toward school, evaluative ratings of courses and instructors and selected respondent characteristics, an attitude inventory, and, for each class, a course and instructor ra ʒ scale, with items which emphasized the nature of student-teacher interaction and level of course difficulty, were administered to 436 students in grades seven through twelve. Significant correlations suggest the need to adjust teacher rating results to account for student attitude, opinions about course difficulty and other dispositional variables. Further development of score-adjustment procedures and research to identify other relevant variables are also indicated. Information regarding the factor structures of the instruments is provided.

The purpose of this study was to explore the relationships among the general attitude of secondary students toward school, their ratings of courses and instructors and selected respondent characteristics. The utilization of teacher ratings for evaluative purposes is far from an exact science, primarily because of the relative recency of effort, the inherent problems and multifaceted nature of the task. Scott (1975) emphasized the increasing importance of addressing the validity of student ratings as the desire for their use as evaluative instruments increases. An analysis of 22 instruments used for instructor evaluation (Widlak, et. al., 1973) indicated a certain commonality of factor structure, with all instruments providing the factors of actor, i. e., presenter, interactor and perhaps also director. Pohlmann (1975) reported significant relationships between class characteristic variables, such as expected grade and whether the course was required or elective, and student ratings in terms of both instructor presentation and interaction as well as course difficulty variables. The majority of these and other such studies are at the college level, with a lack of investigation related to teacher evaluation by students at the secondary level. However, Rosenshine (1973), in analyzing the effect of teacher behavior on students' attitude toward school, found significant positive correlations between attitude of sixth grade students and colleague ratings of teacher behavior in terms of such interaction variables as acceptance of student feelings, praise and use of student ideas. The present study examined correlations among (1) students' attitudes toward school, (2) their evaluation of instructors on a rating scale that primarily emphasized teacher interactive behavior, (3) course difficulty ratings and (4) class characteristic items similar to Pohlmann's. As an

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investigation of correlates of student ratings seeking to identify biasing

factors, Crittenden and Norr (1975) would categorize this study as a conver-

gent and discriminant approach to validity, as opposed to studies concerned

with reliability or relating ratings with achievement.

Method

Subjects.   Respondents included 436 students in grades seven through twelve

at the Florida State University Developmental Research School.

Instruments and Procedures.   Two questionnaires were administered to the stu-

dents.   The first, Attitude Toward School (ATT), was administered to all stu-

dents in their English classes approximately two months prior to the end of

the school year.   The ATT is composed of 51 self-rating items to be marked on

a five point scale from "rarely" to "almost always true"   (see Appendix A).

The ATT is directed toward students' interest in school work, opinions re-

garding teachers and school activities and procedures, behavioral responses

to school tasks, and orientation toward relevant personality characteristics,

such as ambition.   The ATT was developed from 102 items selected from Khan's

(1966) research instrument which incorporated items from Brown-Holtzman (1956),

Child, Frank and Storm (1956), and Smith (1972).   Smith converted items from

Khan's instrument, which was written for high school or college students, to

a reading level judged appropriate for elementary and high school students.

Factor analysis procedures were applied to Ss's responses.   To determine

the appropriate number of factors, a series of analyses were conducted begin-

ning with a principal factoring solution with communality estimates in the

diagonal, followed by varimax rotation.   A five factor oblique solution pro-

vided the final structure.   Programs within the Statistical Package for the

Social Sciences were utilized in the analyses.

Factor I indicated, for the student scoring high on this factor, anxiety
and lack of concentration, retention, organization and comprehension where
school tasks are concerned, with an accompanying lack of motivation or interest.
For factor II a high score would indicate favorable regard for teachers as
presenters and facilitators. Lack of interest, effort, ambition and response
to achievement rewards, i. e., generally failing to perceive school as beneficial.
characterized factor III. Factor IV indicated a positive attitude toward
teacher interactive behaviors. Avoidance of school tasks described factor V.
Table 1 provides the items, their loadings, communality estimates, means and
standard deviations. Subsequent to factor analysis, item responses were re-
versed as needed to provide uniform direction on a one to five scale. The 51
item scores were then summed to produce a general attitude score with high
scores reflecting favorable attitudes.

Insert Table 1 Here

The second instrument, Course and Instructor Rating Scale (CIRS), was
derived from a student questionnaire developed by Sanders and Lynch (1973)
in a study which analyzed discrepancies between perceived and ideal condi-
tions (see Appendix B). The CIRS was administered in the last month of school
and included 31 items, each scored on a 1-5 scale. Responses to 11 items were
summed to produce an instructor rating (RATE) score, with a high score in-
dicating a favorable rating. These items dealt with instructor-pupil inter-
action and included such things as whether the instructor praised good work,
helped students feel better about themselves, treated students fairly, encour-
aged students to develop their own interests and adjusted subject matter to
the interests and ideas of the students. Of the remaining items, seven per-
tained to workload and testing. These were combined to produce a course

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Table 1. Attitude Toward School Item Factor Loadings,
Final Communalities, Means and Standard Deviations. (N=436)

Item Number	Item Stem	Factor Loading	Commu- nality	Item Mean	Item S.D.
Factor I:	Lack of Concentration; Motivation				
39.	* I find it hard to pick out the important points of a reading assignment that may later be asked on a test.	.60	.34	2.61	1.19
12.	* I get nervous and confused when taking a test and fail to answer questions as well as I could.	.55	.29	2.56	1.32
10.	* Lack of interest in my school work makes it hard for me to keep my attention on reading.	.51	.29	2.59	1.27
15.	* Daydreaming keeps me from paying attention while I am studying.	.50	.35	2.43	1.17
13.	* When explaining a lesson or answering questions, my teachers use words that I do not understand.	.48	.38	2.04	1.12
26.	* I am unable to study well because I get restless, moody, and have the blues.	.46	.45	2.41	1.16
24.	* Because I find it hard to think clearly and plan my work within a short time, I do poorly on tests.	.45	.42	2.13	1.10
41.	* With me, studying is sort of hit-or-miss depending on the mood I'm in.	.43	.49	2.41	1.24
33.	* After reading several pages of an assignment, I am unable to remember what I have just read.	.42	.32	2.37	1.21

* Scale responses reversed for scoring purposes.

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Table 1 contd. Attitude Toward School Item Factor Loadings,
Final Communalities, Means and Standard Deviations. (N=436)

Item Number	Item Stem	Factor Loading	Communality	Item Mean	Item S.D.
Factor II: Teachers As Presenters and Facilitators					
2.	My teachers make their subjects interesting and meaningful to me.	.61	.39	2.99	1.00
1.	I feel that teachers understand the needs and interests of students.	.58	.42	3.00	1.11
21.	The illustrations, examples, and explanations given by my teachers are interesting and easy to understand.	.55	.38	3.07	1.02
20.	I feel that teachers try to give the same amount of attention and help to all their students.	.47	.35	3.17	1.27
46.	At the beginning of a study period I plan my work so that I will use the time best.	.46	.33	2.68	1.17
Factor III: Achievement Orientation; Value of School Rewards					
31.	* I think that it might be best for me to drop out of school and get a job.	.66	.58	1.59	1.16
48.	Above all, I want to have an outstandingly successful career.	-.62	.43	3.84	1.35
3.	Whether I like a subject or not, I still work hard to make a good grade.	-.60	.58	3.60	1.28
38.	I complete my homework assignments on time.	-.54	.51	3.68	1.28

* Scale responses reversed for scoring purposes.

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Table 1 contd. Attitude Toward School Item Factor Loadings,
Final Communalities, Means and Standard Deviations. (N=436)

Item Number	Item Stem	Factor Loading	Communality	Item Mean	Item S.D.
50.	Ambition drives me to ever greater efforts.	-.51	.36	3.43	1.26
5.	* My teachers say my written reports are hurriedly written or poorly planned.	.48	.40	1.94	1.19
8.	* I lose interest in my studies after the first few days each year.	.48	.50	1.93	1.18
9.	I give special attention to neatness on themes, reports, and other work to be turned in.	-.44	.40	3.48	1.26
44.	If time is left, I take a few minutes to check over my answers before turning in my test paper.	-.42.	.43	3.59	1.36
30.	I try to be really interested in every subject I take.	-.40	.42	3.43	1.22
Factor IV:	Teacher Interaction				
16.	* I feel that teachers are overbearing and conceited in dealing with students.	-.64	.51	2.22	1.05
17.	* I believe that teachers secretly enjoy giving their students a "hard time."	-.62	.49	2.35	1.21
7.	* I think that teachers like to show who's boss too much.	-.57	.37	2.58	1.15
22.	* I feel that teachers tend to be rude to their poorer students and make fun of their mistakes.	-.53	.36	2.34	1.22
18.	* I think that teachers usually talk too much.	-.52	.40	2.61	1.08

* Scale responses reversed for scoring purposes.

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Table 1 contd. Attitude Toward School Item Factor Loadings, Final Communalities, Means and Standard Deviations. (N=436)

Item Number	Item Stem	Factor Loading	Commu-nality	Item Mean	Item S.D.
29.	* I feel that teachers make their subjects too hard to most students.	-.48	.47	2.27	1.05
35.	* I think that students who ask questions and take part in class discussion are only trying to "get in good" with the teacher.	-.41	.35	2.17	1.15
Factor V: Avoidance of Studies					
27.	* I put off doing my written work until the last minute.	.55	.37	2.64	1.18
36.	* I waste too much time talking, watching TV, listening to the radio, going to the movies, etc., for the good of my studies.	.49	.38	2.36	1.25

* Scale responses reversed for scoring purposes.

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difficulty (DIFF) score, with a high score indicating relative ease. Decisions regarding the items to be included in RATE and DIFF scores were made on a priori, face validity basis taking into consideration prior research and development efforts and led to the decision to exclude seven items.

Factor analysis of Ss' responses, utilizing aggregated mean responses for each item for each S and the same procedures as with ATT, generally supported the validity of these decisions. Table 2 provides the items, their loadings, communality estimates, means and standard deviations. As indicated, three factors were derived. Factor I contained seven of the 11 RATE items and two unscored items. This factor can readily be considered as an evaluation of the instructor's interactive behaviors. Factor II contained four DIFF items, one RATE item and three unscored items, all of which involved evaluation of course activities and requirements, e. g., frequency of testing and amount of assignments. Factor III contained three DIFF and two RATE items pertaining to the amount of challenge or generic demand that the course provided in terms of amount of work, pace and intellectual stimulation. In many ways this factor can be viewed as representing the overlap between teacher stimulation and course difficulty, i. e., the area in which the two become integral for evaluation purposes. Such a view is supported by the representation of both RATE and DIFF items and would suggest the likelihood of obtaining a substantial relationship between RATE and DIFF. One RATE and three unscored items did not appear in any of the factors.

In addition to the 11 RATE, seven DIFF and seven excluded five-point Likert-type items, responses to four class characteristic (CHAR) items were gathered for the purpose of examining their individual and collective relationship with ATT, RATE and DIFF scores. These items solicited indications of the student's expected grade, enjoyment of subject, whether the course had been

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recommended by a peer and whether it was required for graduation. An additional two class characteristic items completed the scale but were not of interest in the present study.

Insert Table 2 Here

Students were requested to provide their student indentification numbers when completing both scales and were assured anonymity. CIRS was not administered by the instructor being rated. Instead, instructors traded classes for the first part of a given period and followed a standard procedure for administration. Classes selected to complete CIRS included those of teachers who voluntarily chose to have the scale administered, approximately 87 percent (N=33) of the secondary level faculty. For students failing to provide an identification number when completing either of the scales, data were, of necessity, eliminated from subsequent analyses. No follow-up testing was conducted to include absentees. Thus, the resultant N of 436 different respondents represented 81 percent of the student body.

Results

Initial analyses were primarily for the purpose of providing instructor feedback. The ATT and RATE scores were computed for each student by class with the mean and standard deviation of each variable for each class, as well as the correlation between these variables provided to the instructor. These results were also aggregated to produce means and correlations representing the combined classes of each teacher. Finally, these results were further aggregated to provide the same set of indices for each content area. Figure 1 graphically portrays each level of aggregation and Tables 3 and 4 include the latter two levels of composite data.

Table 2. Course and Instructor Rating Scale Factor Loadings,
Final Communalities, Means and Standard Deviations
Excluding Class Characteristic Items.   (N=436)

Item Number	Item Stem	Response Poles	Factor Loading	Commu- nality	Item Mean	Item S.D.
Factor I: Teacher Interaction						
RATE Items						
22.	The instructor helped students feel better about themselves.	frequently/ never	-.83	.57	2.74	.81
25.	The instructor adjusted the subject matter to the interests of the class.	very well/ not at all	-.71	.44	2.71	.79
24.	The instructor encouraged students to develop interests of their own.	always/ never	-.70	.51	2.45	.80
21.	The instructor praised good work.	always/ never	-.69	.48	2.42	.72
23.	The instructor treated me fairly.	always/ never	-.55	.40	1.94	.66
8.	The instructor took time to help students in class.	always/ never	-.54	.40	2.00	.64
7.	The instructor displayed a sense of humor.	always/ never	-.52	.33	2.47	.72
Unscored Items						
13.	The course content was	very inter- esting/ very uninteresting	-.60	.45	2.29	.69

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Table 2 contd. Course and Instructor Rating Scale Factor Loadings,
Final Communalities, Means and Standard Deviations
Excluding Class Characteristic Items. (N=436)

Item Number	Item Stem	Response Poles	Factor Loading	Commu-nality	Item Mean	Item S.D.
19.	The amount of information provided students regarding their progress during the course was	very great/ very small	-.46	.32	2.71	.73
Factor II:	**Difficulty--Specific Course Activities**					
RATE Items						
4.	The instructor went into too much detail when explaining material.	always/ never	.48	.24	3.20	.84
DIFF Items						
14.	Testing of the course content was	very fre-quent/not very often	.46	.32	2.72	.68
16.	The number of hand-in assignments was	too large/ too small	.44	.31	2.60	.62
9.	The amount of reading assigned by the instructor for this class was	too much/ not enough	.42	.27	2.76	.64
15.	The amount of reference materials (handouts, texts, reserved books, etc.) was	very large/ quite small	.41	.32	2.55	.79

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Table 2 contd. Course and Instructor Rating Scale Factor Loadings, Final Communalities, Means and Standard Deviations Excluding Class Characteristic Items. (N=436)

Item Number	Item Stem	Response Poles	Factor Loading	Commu- nality	Item Mean	Item S.D.
Unscored Items						
18.	The number of audiovisual materials used in the course was	very great/ very small	.59	.33	3.51	.82
10.	The instructor lectured	too much/ not enough	.53	.31	2.81	.59
11.	The instructor did not go into enough details when explaining material.	always/never	.41	.23	3.52	.74
Factor III: Difficulty--Overall Challenge						
RATE Items						
3.	The instructor provided situations for students to think for themselves.	always/never	-.52	.35	1.92	.60
6.	The instructor made the course challenging to his students.	always/never	-.46	.46	2.16	.68
DIFF Items						
5.	The instructor demanded a lot of work from his students.	always/never	-.65	.35	2.12	.72
12.	The pace (assignment, work, and discussions) of the course was	very fast/ very slow	-.52	.30	2.31	.59

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Table 2 contd. Course and Instructor Rating Scale Factor Loadings,
Final Communalities, Means and Standard Deviations
Excluding Class Characteristic Items.   (N=436)

Item Number	Item Stem	Response Poles	Factor Loading	Commu- nality	Item Mean	Item S.D.
1.	The amount of work I did for this course was	very great/ quite small	-.47	.26	1.80	.58

As indicated, significant relationships were obtained for seven of the 11 content areas and for 14 of the 33 teachers. The range of correlations for both tables can be summarized as -.09 to .54, with 75 percent falling between .05 and .30.

On the basis of these results the decision was made to pursue a more comprehensive investigation of factors that influence teacher ratings by students. Item responses to CIRS were aggregated across classes to produce a single set of mean responses to the 31 items for each S, and these data provided the basis for the previously presented factor analysis. Figure 2 portrays the nature of this aggregation. The maximum number of CIRS completed by an individual student was eight, with 3.77 representing the mean. Means and standard deviations for ATT, RATE and DIFF, with data aggregated in this fashion, together with zero-order correlations among these and the selected CHAR variables, are provided in Table 5.

Insert Figure 2 and Table 5 Here

As indicated, 13 of the 21 relationships were significant in the expected directions. All relationships among the scored variables, i. e., ATT, RATE, DIFF, were significant. DIFF was not significantly related to any of the CHAR variables and whether the course was required was not related to any of the scored variables. However, the remaining CHAR items were correlated with ATT and RATE, with enjoyment of subject providing the strongest relationships.

To validate the a priori selection of items comprising RATE and DIFF, as well as clarify the observed correlations among the three scored variables, factor scores were generated for both ATT and CIRS with CHAR items excluded.

Collected ATT data

1 month

Collected CIRS data

feedback

1. RATE $\bar{X}$
2. ATT $\bar{X}$
3. RATE/ATT r

Class 1
Class 2
•••
Class n

Class 1
Class 2
•••
Class n

Class 1
Class 2
•••
Class n

Teacher 1

Teacher 2

•••

Teacher n

English Dept.

Tables 3 & 4

Figure 1. Type I Aggregation

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Table 3. Correlations, Means and Standard Deviations
for the Attitude Toward School (ATT) and Instructor Rating Score (RATE)
of the Course and Instructor Rating Scale (CIRS)
by Content Areas for
7th Through 12th Grade Students.*

Content Areas	N	r	p	ATT		RATE	
				$\bar{x}$	S.D.	$\bar{x}$	S.D.
Math	328	.13	.011	179	28.8	40.6	6.6
Science	268	.24	<.001	179	30.0	39.5	7.5
English	260	.07	.127	181	28.8	40.9	6.7
Social Studies	321	.19	<.001	177	29.0	37.4	7.4
Physical Education	101	.13	.098	185	29.2	41.?	7.2
Foreign Language	204	.23	<.001	184	27.1	41.1	6.9
Music	372	.12	.009	178	30.7	38.4	7.8
Industrial Arts	71	.23	.026	169	21.4	36.4	7.1
Home Economics	66	.33	.003	175	27.3	39.3	6.2
Art	34	.15	.205	172	32.7	38.5	8.8
Business	59	.01	.469	176	34.5	39.6	6.4

* α = .05
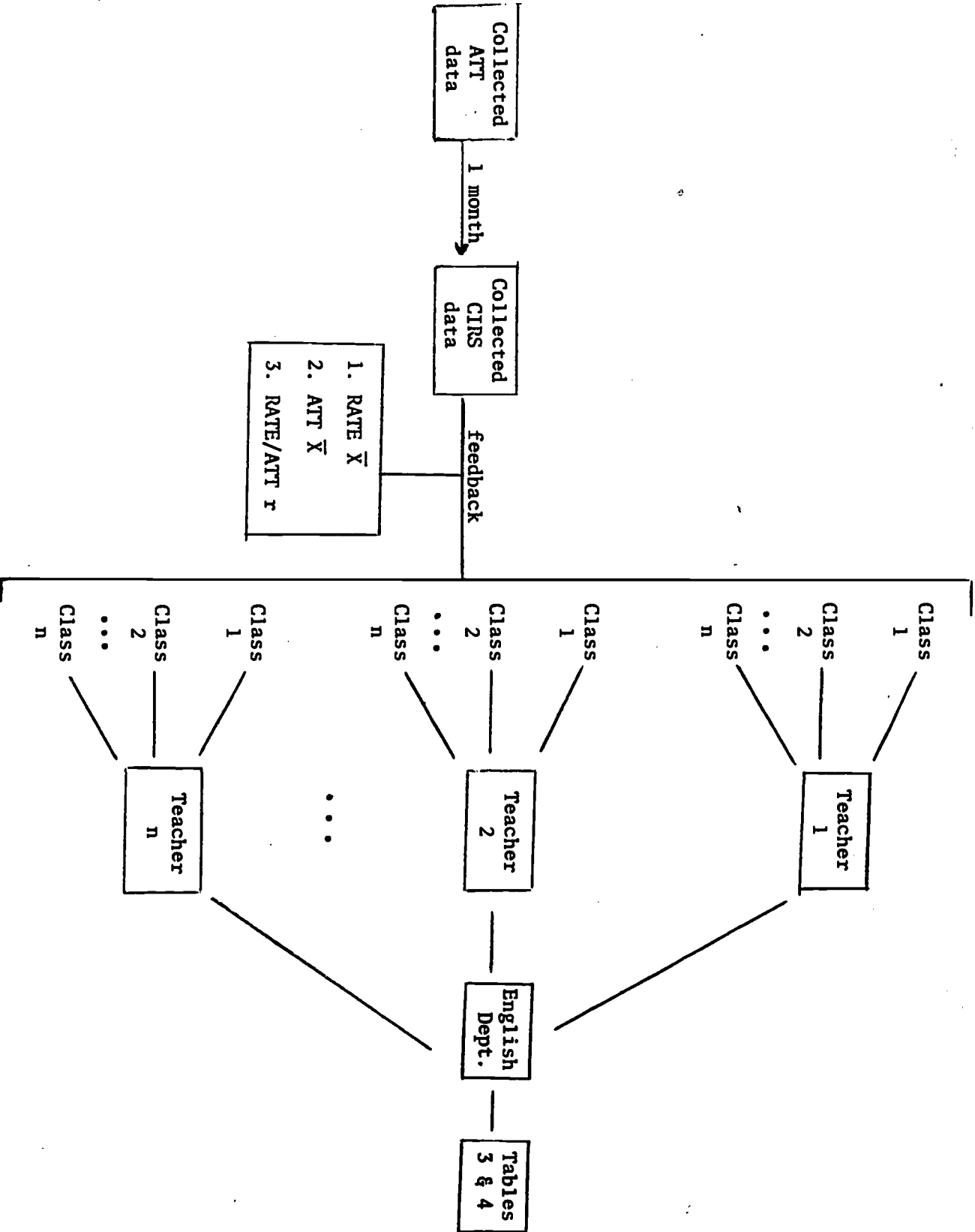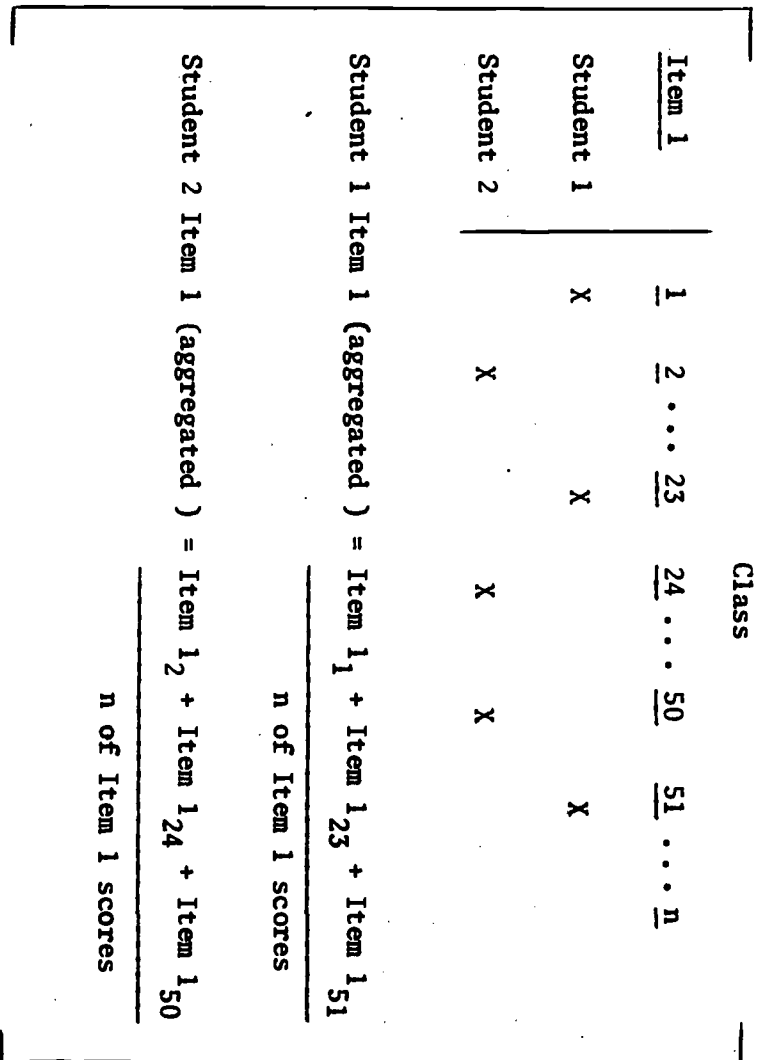
Table 4. Correlations, Means, Standard Deviations
for the Attitude Toward School (ATT) and Instructor Rating Score (RATE)
of the Course and Instructor Rating Scale (CIRS)
by Teacher for 7th Through 12th Grade Students. *

Area	Teacher	N	r	p	ATT $\overline{x}$	ATT S.D.	RATE $\overline{x}$	RATE S.D.
	1	44	.08	.302	187	27.0	36.7	5.7
	2	56	.43	<.001	175	21.8	44.8	4.8
Math	3	77	.27	.008	181	27.8	42.1	6.1
	4	72	.16	.088	171	32.6	40.7	6.7
	5	79	.10	.179	182	30.2	38.4	6.7
	6	37	.30	.036	177	26.8	35.7	8.8
	7	28	.05	.409	187	26.8	41.7	5.0
Science	8	28	.12	.270	187	25.7	35.3	8.2
	9	45	.54	<.001	179	30.3	43.2	5.8
	10	60	.08	.277	175	30.2	37.9	6.7
	11	70	.35	<.001	178	33.6	41.4	7.2
	12	68	-.09	.234	180	22.9	38.8	6.3
	13	47	.27	.034	183	30.2	40.6	7.9
English	14	55	.05	.348	180	27.1	42.2	5.1
	15	13	.07	.408	185	25.1	36.2	9.9
	16	77	.08	.238	180	34.5	42.8	5.8
	17	78	.08	.231	178	27.0	34.4	7.6
Social	18	71	.12	.167	172	29.0	39.9	6.9
Studies	19	75	.19	.050	178	25.2	36.5	6.4
	20	97	.36	<.001	180	33.0	38.6	7.7
PE	21	101	.13	.098	186	29.2	41.8	7.2
	22	61	.17	.101	182	27.1	39.1	7.4
Foreign	23	64	.34	.003	185	24.5	39.5	6.3
Language	24	50	.07	.320	193	28.7	43.6	6.3
	25	29	.09	.313	191	25.2	44.6	7.2
	26	55	.28	.021	176	25.9	42.1	6.0
Music	27	124	.21	.009	176	32.8	36.9	7.2
	28	195	.04	.313	179	30.4	39.3	7.5
Industrial Arts	29	71	.23	.026	169	21.4	36.4	7.1
Home	30	27	.43	.012	180	30.4	39.3	5.8
Economics	31	39	.27	.050	172	24.9	39.3	6.6
Art	32	34	.15	.205	172	32.7	38.5	8.8
Business	33	59	.01	.469	176	34.5	39.6	6.4

* α = .05

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Figure 2. Type II Aggregation

Class

Item 1	1	2 ... 23	24 ... 50	51 ... n
Student 1	x	x	x	
Student 2		x	x	x

Student 1 Item 1 (aggregated) $= \dfrac{\text{Item } 1_1 + \text{Item } 1_{23} + \text{Item } 1_{51}}{n \text{ of Item 1 scores}}$

Student 2 Item 1 (aggregated) $= \dfrac{\text{Item } 1_2 + \text{Item } 1_{24} + \text{Item } 1_{50}}{n \text{ of Item 1 scores}}$

Data base for:

1. Factor analysis (2)
2. Factor/a priori score correlations (6)
3. Canonicals (7)
4. CHAR/a priori score correlations (5)

Table 5. Means and Standard Deviations of Scored Variables and
Correlations Among Scored and Class Characteristic Variables.* (N=436)

	ATT	RATE	DIFF	Course Required	Enjoy Subject	Course Recommended
RATE	.30 <.001					
DIFF	.09 .024	-.22 <.001				
Course Required	-.07 .068	.02 .350	.03 .259			
Enjoy Subject	-.26 <.001	-.41 <.001	.01 .383	.27 <.001		
Course Recommended	-.12 .005	-.11 .011	.06 .109	.21 <.001	.39 <.001	
Expected Grade	-.20 < .001	-.15 <.001	-.01 -.396	.06 .113	.115 <.001	.04 .200
Mean	177.63	39.53	16.85			
S.D.	28.04	4.50	2.67			
Possible Range	55-255	11-55	7-35			

* Probabilities appear below correlation coefficients and are one-tailed;
α =.05. Indicated directions of these correlations must be carefully
considered in conjunction with direction of scoring and results of factor
analyses.

A principal component solution, i. e., unity in the diagonals, which specified the number of factors considered appropriate by the previous factor analysis, was used. The a priori scored variables were then correlated with the factor scores. The results are presented in Table 6.

                            Insert Table 6 Here

The -.89 correlation between RATE and the teacher interaction factor of CIRS, as well as the correlation of .93 between DIFF and the combined difficulty factors, as seen in Table 6, strongly support the original assignment of scored items. The negative correlation results from the reversal of RATE items for scoring purposes. Interestingly, favorable ATT and RATE scores were associated with relative lack of difficulty in terms of specific course activities, as may be expected, but were conversely associated with presence of difficulty in terms of challenge and stimulation.

The ATT factors are, of necessity, strongly related to ATT score, since this score represents a linear combination of all scale items. ATT factor II, which involves general attitude regarding teachers as presenters and facilitators, bears the most consistent and strongest relationships with the other variables presented, lacking relationship only with CIRS factor III, overall challenge. These relationships indicate that students with favorable attitudes toward teachers in general tended to provide favorable ratings for their teachers and not view courses as difficult in terms of specific activities required. ATT factor V, avoidance of school tasks, is significantly related only to the two teacher rating variables such that those who avoid school tend to rate their teachers unfavorably. ATT factors I and IV indicate scant, though occasionally significant relationships. There is some indication that Ss who scored high on ATT factor IV, indicating favorable regard for teachers as interactors,

Table 6. Correlations Among Scored Variables, Individual
Factor Scores and Selected Combinations.* (N=436)

		CIRS Factors**					ATT Factors				
		.I	II	III	I+III	II-III	I	II	III	IV	V
Scored Variables	ATT	-.23	.25	.10	.23	.10	-.49	.37	-.48	.50	-.38
		<.001	<.001	.020	<.001	.020	<.001	<.001	<.001	<.001	<.001
	RATE	-.89	.11	.34	.87	-.16	-.05	.25	-.16	.08	-.16
		<.001	.010	<.001	<.001	<.001	.133	<.001	<.001	.047	<.001
	DIFF	.06	.66	-.67	-.51	.93	-.02	.15	.03	.07	-.01
		.106	<.001	<.001	<.001	<.001	.352	<.001	.242	.059	.414
CIRS Factors	I						.02	-.24	.06	-.06	.20
							.357	<.001	.097	.097	<.001
	II						-.07	.25	-.16	.08	0.00
							.067	<.001	<.001	.047	.500
	III						-.04	0.00	-.20	-.02	-.03
							.181	.500	<.001	.350	.295

* Probabilities appear below correlation coefficients and are one-tailed;
α = .05. Indicated directions of these correlations must be carefully
considered in conjunction with direction of scoring and results of factor
analyses.

** Excluding CHAR items.

tended to provide favorable specific ratings of their teachers, and not view their courses as difficult in terms of required activities. These relationships are thus consistent with, but not as strong as those obtained with ATT factor II. Students scoring high on ATT factor III, indicating a failure to perceive the benefits of school, tended to score low on CIRS factor III, indicating lack of overall challenge in their courses, and to also score low on CIRS factor II, indicating relative difficulty in terms of course activities.

Because course difficulty in terms of overall challenge was viewed as an integration of both teacher and course ratings, CIRS factors I and III were combined and correlated with the scored variables. The magnitude of the resulting relationships are analogous to those of factor I alone, except, of course, with DIFF, where a sizable correlation increase was inevitable since CIRS factor III contains primarily DIFF items.

Canonical correlations among the respective items of ATT, RATE, DIFF and CHAR were also calculated to determine maximum obtainable correlations given optimally weighted, linearly combined item responses. These results are provided in Table 7.

Insert Table 7 Here

These results indicate that there is at least one meaningful and significant relationship obtainable for each possible pair of item sets. For the relationship between ATT and RATE there are three unique sets of item coefficients which, when utilized in the linear combination of respective items, produce significant and meaningful correlation coefficients. For the presented relationships involving CHAR items, expected grade and enjoyment of subject separately indicated strongest weights. Expected grade predominantly defined the item set for the relationship with DIFF and in the first root with

Table 7. Significant Canonical Correlations
Among Item Sets.* (N=436)

		ATT/ RATE	ATT/ DIFF	ATT/ CHAR	RATE/ DIFF	RATE/ CHAR	DIFF/ CHAR	ATT, DIFF, CHAR/RATE
I	R_c	.538	.446	.509	.546	.529	.470	.707
	χ^2	783	412	306	303	182	128	1184
	df	561	357	204	77	44	28	682
	p	<.001	.023	<.001	<.001	<.001	<.001	<.001
II	R_c	.522		.422	.370			.615
	χ^2	645		183	152			908
	df	500		150	60			610
	p	<.001		.031	<.001			<.001
III	R_c	.479						.558
	χ^2	516						718
	df	441						540
	p	.007						<.001
IV	R_c							.518
	χ^2							570
	df							472
	p							<.001

* Reported are correlations that are significant (α =.05) and exceed .30.

ATT, while enjoyment of subject defined the second root and the relationship
with RATE. The correlation of .707 between the set of RATE items and the
items of ATT, DIFF and CHAR considered collectively, indicates that about 50
percent of RATE variance can be accounted for by the combined set of other
variables, or vice-versa. The item with the largest weight by far was enjoy-
ment of subject.

Discussion

The results indicate that the attitudes of students toward school and
teachers, as well as their specific opinions regarding course difficulty, their
enjoyment of the subject and the grade they expect to receive, are strongly
related to their ratings of teachers. It is also evident, however, that
teacher ratings are to a substantial degree distinct from the other variables.
Such a finding contributes some understanding to the credibility of teacher
ratings by students. Variables such as those investigated, which collectively
may be said to constitute a predisposition or evaluative set, appear to distort
the valid component of teacher ratings. This would suggest the need to account
for such an effect in the interpretation and utilization of teacher rating data,
whether for purposes of feedback or for improving decisions related to compe-
tency, promotion or tenure. One approach would be the development of measures
which do not confound variables, though it is likely that success in this regard
would be limited. Alternatively, an appropriate total score on a teacher rating
scale would include adjustments for the effects of predisposition. The wide
range of correlations obtained across classes and content areas between RATE
and ATT, as indicated in Tables 3 and 4, suggests that such adjustments should
be on the basis of accumulated influences of individual students and specific
to individual teachers and/or classes. One possible method of adjustment would

be to generate canonical variate scores for each student based on the complete set of items considered to be independent variables. These scores could then be utilized as coefficients for each student's dependent variable, i. e., teacher rating score. The mean of these adjusted scores would constitute the evaluation index.

In addition to the variables investigated, there are perhaps other variables exerting separate influences in similar fashion. Also, it should be emphasized that RATE items primarily focused upon interactive aspects of the teaching role. It therefore would be important to extend to other areas, e. g., teacher as presenter and director. Such variables should be the target for future research.

As a potential qualification to the external validity of these findings, it should be considered that the sample of laboratory school students probably represents, in terms of attitude, a narrower range and a group that is somewhat more favorably disposed than would be the case in many public school settings. It is unlikely that a substantially different pattern of relationships would emerge, though it is possible that the magnitude of relationships would increase as a result of removal of restriction of range.

In summary, the significant correlations obtained among the various dispositional variables and the teacher rating indices indicate the need (1) to incorporate the influence of such variables in the utilization of teacher rating data, (2) to conduct further research to identify other relevant variables, (3) establish appropriate score-adjustment procedures and (4) cross-validate present findings.

Appendix A

Attitude Toward School

In this survey are some sentences which will give you an opportunity to tell how you feel about school and about the way you study. Your answers will be treated with the strictest confidence, so please answer exactly the way you feel. There are no right or wrong answers.

You will mark you answers on a separate answer sheet. Make no marks on this booklet. After reading each sentence, decide how you feel about it and mark you answer on the answer sheet with a number 2 lead pencil

If you feel that the statement is <u>rarely</u> true
for you, blacken the first space ....
(<u>Rarely</u> means from 0 to 15 percent of the time)

If you feel that the statement is <u>sometimes</u>
true for you, blacken the second space
(<u>Sometimes</u> means from 16 to 35 percent of the time)

If you feel that the statement is <u>frequently</u>
true for you, blacken the third space
(<u>Frequently</u> means from 36 to 65 per cent of the time)

If you feel that the statement is generally
true for you, blacken the fourth space
(Generally means from 66 to 88 per cent of the time)

If you feel that the statement is <u>almost</u>
<u>always</u> true for you, blacken the fifth space
(<u>Almost always</u> means from 86 to 100 per cent of the time)

Work as rapidly as you can without being careless. <u>Please answer every item.</u>

1. I feel that teachers understand the needs and interests of students.

2. My teachers make their subjects interesting and meaningful to me.

3. Whether I like a subject or not, I still work hard to make a good grade.

4. When my assigned homework is extra long or unusually hard, I quit or study only the easier parts of the lesson.

5. My teachers say my written reports are hurriedly written or poorly planned.

6. I feel that teachers do not allow their likes or dislikes for students to influence their grading too much.

7. I think that teachers like to show who's boss too much.

8. I lose interest in my studies after the first few days each year.

9. I give special attention to neatness on themes, reports, and other work to be turned in.

10. Lack of interest in my school work makes it hard for me to keep my attention on reading.

11. Unless I really like a subject, I believe in doing only enough to get a passing grade.

12. I get nervous and confused when taking a test and fail to answer questions as well as I could.

13. When explaining a lesson or answering questions, my teachers use words that I do not understand.

14. When I get behind in my school work for something I can't help, I make up lessons without being reminded by the teacher.

15. Daydreaming keeps me from paying attention while I am studying.

16. I feel that teachers are overbearing and conceited in dealing with students.

17. I believe that teachers secretly enjoy giving their students a "hard time."

18. I think that teachers usually talk too much.

19. When I am having trouble with my school work, I try to talk it over with the teacher.

20. I feel that teachers try to give the same amount of attention and help to all their students.

21. The illustrations, examples, and explanations given by my teachers are interesting and easy to understand.

22. I feel that teachers tend to be rude to their poorer students and make fun of their mistakes.

23. I feel that my grades show what I can really do.

24. Because I find it hard to think clearly and plan my work within a short time, I do poorly on tests.

25. Some of my classes are so boring that I spend the class period drawing pictures, writing notes, or daydreaming instead of listening to the teacher.

26. I am unable to study well because I get restless, moody, and have the blues.

27. I put off doing my written work until the last minute.

28. I feel that I am taking subjects which will do me little good.

29. I feel that teachers make their subjects too hard to most students.

30. I try to be really interested in every subject I take.

31. I think that it might be best for me to drop out of school and get a job.

32. I skip over the figures, graphs, and tables in a reading assignment.

33. After reading several pages of an assignment, I am unable to remember what I have just read.

34. I feel like skipping school whenever there is something I'd rather do.

35. I think that students who ask questions and take part in class discussion are only trying to "get in good" with the teacher.

36. I waste too much time talking, watching TV, listening to the radio, going to the movies, etc., for the good of my studies.

37. I believe that teachers give tests on purpose on the days following parties and ball games.

38. I complete my homework assignments on time.

39. I find it hard to pick out the important points of a reading assignment that may later be asked on a test.

40. When reading a long assignment, I stop now and then to try to remember what I have read.

41. With me, studying is sort of hit-or-miss depending on the mood I'm in.

42. I keep my assignment up to date by doing my work regularly from day to day.

43. I am careless of spelling and the rules of English when answering test questions.

44. If time is left, I take a few minutes to check over my answers before turning in my test paper.

45. I feel that students can be expected to like most teachers.

46. At the beginning of a study period I plan my work so that I will use the time best.

47. I dislike the discipline required for successfully accomplishing some difficult task.

48. Above all, I want to have an outstandingly successful career.

49. I feel that much of life's enjoyment is lost because we are taught that it is so important to get ahead in life.

50. Ambition drives me to ever greater efforts.

51. I feel that in our schools too much stress is put on achievement.

Appendix B

Course and Instructor Rating Scale
Grades 7-12

DIRECTIONS: There are no right or wrong responses to these
statements.   Record your reactions for each statement on
your answer sheet.   Do not write on the booklet.   Describe
your reactions to each statement as best you can by marking
one of the five letters A, B, C, D, or E.   For example, for
Item 1 if you think the amount of work you did in this course
was very great, record the letter A; if you think the amount
of work you did in this course was quite small, record the
letter E; if you think the amount of work you did in this
course was moderate, record the letter C.   If you feel the
rating should be placed between one of these categories, please
indicate by responding to categories B or D.

IMPORTANT!   Do not write your name on the answer sheet or make
any marks on this rating scale.   Please record your four digit
identification number in the boxes at the lower right hand
corner of your answer sheet.   Grid the appropriate spaces below
each box by making a heavy mark with your pencil.   Be certain
to use a number 2 pencil.   Now write the instructor's name,
course name and date of administration in the spaces provided
at the top of your answer sheet.

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1. The amount of work I did for this course was — very great A B C D E quite small

2. Opportunities to enter into class discussion were — very great A B C D E quite small

3. The instructor provided situations for students to think for themselves — always A B C D E never

4. The instructor went into too much detail when explaining material — always A B C D E never

5. The instructor demanded a lot of work from his students — always A B C D E never

6. The instructor made the course challenging to his students — always A B C D E never

7. The instructor displayed a sense of humor — always A B C D E never

8. The instructor took time to help students in class — always A B C D E never

9. The amount of reading assigned by the instructor for this class was — too much A B C D E not enough

10. The instructor lectured — too much A B C D E not enough

11. The instructor did not go into enough details when explaining material — always A B C D E never

12. The pace (assignment, work, and discussions) of the course was — very fast A B C D E very slow

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13. The course content was

very interesting   A B C D E   very un-- interesting

14. Testing of the course content was

very frequent   A B C D E   not very often

15. The amount of reference ma-terials (handouts, texts, reserved books, etc.) was

very large   A B C D E   quite small

16. The number of hand-in assignments was

too large   A B C D E   too small

17. The amount of teacher direc-tion for this class was

very great   A B C D E   very small

18. The number of audiovisual materials used in the course was

very great   A B C D E   very small

19. The amount of information provided students regarding their progress during the course was

very great   A B C D E   very small

20. The students wasted time in this class

a lot   A B C D E   very little

21. The instructor praised good work

always   A B C D E   never

22. The instructor helped students feel better about themselves

frequently   A B C D E   never

23. The instructor treated me fairly

always   A B C D E   never

24. The instructor encouraged students to develop interests of their own

always   A B C D E   never

25. The instructor adjusted the   very _____ not at
    subject matter to the in-   well A B C D E all
    terests of the class

Record your answers to each of the following six items in the
appropriate space on your answer sheet.

26. Were you required to take this course for graduation re-
    quirements?

         (A) yes   (B) no

27. Do you enjoy this subject?

         (A) yes   (B) no

28. Was this course recommended to you by another student?

         (A) yes   (B) no

29. Since you have been in seventh grade, how many courses have
    you had in this subject area? (Consider a course to be one
    semester in length.)

         (A) none   (B) 1-2   (C) 3-4   (D) 5-6   (E) 7 or more

30. How would you estimate your grade-point-average for all your
    subjects this semester?

         (A) Excellent   (B) Above average   (C) Average

         (D) Below average   (E) Poor

31. What grade do you expect to receive in this course?

         (A) Excellent (B) Above average   (C) Average

         (D) Below average   (E) Poor

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