

## DOCUMENT RESUME

ED 050 129

TM 000 178

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 TITLE Faculty Perceptions of Students: Desirability and Perception of Academic Performance, Part IV.  
 INSTITUTION Educational Testing Service, Princeton, N.J.  
 SPONS AGENCY College Entrance Examination Board, New York, N.Y.  
 REPORT NO EB-64-13  
 PUB DATE Mar 64  
 NOTE 13p.

EDRS PRICE MF-\$0.65 HC-\$3.24  
 DESCRIPTORS \*Academic Performance, Admission Criteria, Cluster Grouping, Colleges, College Students, College Teachers, Correlation, Factor Analysis, Factor Structure, Individual Characteristics, Intelligence Factors, \*Personality Assessment, Rating Scales, \*Student Characteristics, \*Student Evaluation, Success Factors, \*Teacher Attitudes

## ABSTRACT

This report, a continuation of the study described in TM 000 174 and TM 000 176, employs identical data and similar methods to determine the nature of desirability separate and apart from the rater's perception of the student's academic performance (rather than his actual performance). The results show an absorption in the faculty perception of performance of much of the variance previously associated with dependability, intellectual ability and values, motivation, self-sufficiency/creativity, and maturity in defining desirability apart from academic performance. The analysis tends, however, to accentuate the contribution of other traits, notably ethicality, likableness, open-mindedness, and altruism. It appears that desirability is highly related to perception of academic performance, and that other areas, normally expected to make an honest contribution to performance (dependability and motivation, for example) are perceived by the faculty to do so. There is a remaining reliable variance in Scholastic Aptitude Test (SAT) scores and actual grades which is related neither to perception of performance nor desirability. See TM 000 177 and TM 000 179-000 181. (Author/DG)

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FACULTY PERCEPTIONS OF STUDENTS

IV. Desirability and Perception of Academic Performance

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Research Bulletin

RB-64-13

March 1964

EDUCATIONAL TESTING SERVICE

Princeton, New Jersey

81100007

## FACULTY PERCEPTIONS OF STUDENTS

### IV. Desirability and Perception of Academic Performance

#### Abstract

A previous study in this series was devoted to the definition, using the diagonal method of factoring, of student desirability separate and apart from academic performance. Variables employed consisted of ratings of students by faculty on 30 traits, as well as high school and college grade averages and SAT scores.

In the present study, the same data and similar methods were employed to determine the nature of desirability separate and apart from the rater's perception of the student's academic performance (rather than his actual performance).

The results tend to show an absorption in the faculty perception of performance of much of the variance previously associated with dependability, intellectual ability and values, motivation, self-sufficiency/creativity, and maturity in defining desirability apart from academic performance. The results tend, however, to verify or accentuate the contribution of other traits, notably ethicality, likableness, open-mindedness, and altruism. It does appear that desirability is highly related to perception of academic performance, and that other areas normally expected to make an honest contribution to performance (e.g., dependability, intellectual ability and values, motivation, and self-sufficiency/creativity) are perceived by the faculty to do so. Finally, there is remaining reliable variance in SAT and actual grades, as well as in such previously established areas as conformity and extraversion, which is related neither to perception of performance nor desirability.

## FACULTY PERCEPTIONS OF STUDENTS

### IV. Desirability and Perception of Academic Performance

#### Introduction

In a previous study (Davis, 1964b) concerned with faculty definition of the desirable student, multi-trait ratings of students by faculty were employed to determine the nature of desirability separate and apart from academic performance. As general desirability, academic performance, and positive ratings on other traits are interrelated, the problem involved (a) establishing a criterion of academic performance, (b) using statistical procedures to separate out that portion of reliable variance in desirability and the other trait ratings that is not attributable to differences in academic performance, and (c) determining interrelationships among these residuals.

Thus, using the freshman grade-point average (FGPA) as the criterion of academic performance, it was found that faculty define desirability separate and apart from academic performance primarily in terms of intellectual values, ethicality, likableness, independent creativity, open-mindedness, altruism, maturity, and self-insight.

However, the subjects were students in the raters' classes, and it may be assumed that the raters have firsthand knowledge of each student's performance. Some of the variance found in desirability apart from FGPA may be attributable to variance in the faculty member's perception of the student's performance; some of the variance that desirability and FGPA have in common may not be attributable to the rater's perception of performance, which may differ from FGPA as a function of the particular course area or instructor.

The present analysis, then, is directed toward the definition of desirability apart from perception of performance rather than from the consensus expressed by FGPA. Do the previous components hold? Also, what traits are related to the individual perception of performance?

#### Subjects and Basic Data

The 696 sets of ratings employed in the basic study (Davis, 1964b) were again used for this analysis; these involved 407 faculty raters and 398 students at eight institutions. Good communality estimates, essential to the diagonal factoring method to be employed, were drawn from factor analyses performed as part of the broader study. The ratings were those provided by the Student Rating Form (Davis, 1964a), where 80 traits, plus SAT-V, SAT-M, High School Rank, and Freshman Average Grade provided variables for the 84 x 84 matrix.

#### Procedure

The diagonal method of factoring (Thurstone, 1947) was employed. This procedure permits removal of that portion of the reliable variance in one measure that is related to a given criterion, to permit identification of the remaining reliable variance in the measure, through correlates, which is not related to the criterion.

A first factor was defined by a vector placed through the criterion, a rating-scale variable calling for rating on "academic performance." The residual variance for a measure of desirability, defined by a rating of the student as "the kind of student the institution should (or should not) admit,"

was used to define a second orthogonal factor. Loadings of the other rating-scale variables, and SAT-V, SAT-M, High School Rank, and FGPA were computed for these two factors. Thus, the first factor absorbs all the variance in the academic performance rating; loadings of other variables on this factor show the extent of reliable associated variance. The second factor is, by definition, desirability apart from what is measured by Factor I, and loadings of other variables on Factor II may aid in defining it. Finally, a third factor was defined by placing a vector through a point defined by the SAT-V residual (after the variance attributable to performance and desirability was removed), to determine the nature of remaining reliable variance in SAT.

### Results and Discussion

Results are presented in Table 1, which provides rating-scale item identification, communalities, loadings on the three constructed factors, and residual communalities. (For ready comparison, comparable data from the previous study are reproduced as Table 2.) Rating-scale variables are grouped in clusters indicated by a separate factor analysis employing the equimax rotation (Davis, 1964c).

It is immediately apparent from these data that desirability apart from rater perception of performance does not seem as complex as does desirability apart from actual grade performance. In the first place, the loading of desirability on perception of performance is .72, against a value of .42 (Table 2), on FGPA. This not only implies that desirability is more highly related to what the instructor believes performance to be than to what it is (or was, through the freshman average), but also that the second factor--

Table 1

Factor Loadings: Diagonal Factoring with Vectors Placed Through Percepton of Academic Performance (I), Desirability (II), and SAT-V (III)

Item	Contents	$R^2$	I (GPA)	II (SO)	III (SAT-V)	Com	Item	Content	$R^2$	I (GPA)	II (SO)	III (SAT-V)	Com
1.	High academic performance	.1	.94	.00	.00	.00	EXTRAVERSION		.65	-.04	-.18	-.01	.63
5*	Kind of institution should admit	.64	.72	.43	.00	.00	42.	extraverted	.68	.03	.23	.05	.62
-	SAT-V	.76	.20	-.27	.67	.00	6.	gregarious	.74	-.24	-.04	-.14	.50
-	SAT-M	.62	.19	-.31	.64	.00	71.	pleasant	.74	.18	.33	.16	.35
-	Freeman GPA	.54	.13	-.22	.28	.17	63.	optimistic	.39	.37	.33	-.01	.17
-	High School Rank	.51	.28	-.05	.20	.19	79.	high level of physical exc. 6V	.59	.54	.12	.65	.28
DESERVABILITY							31.	self-directing	.77	.67	.26	.27	.18
13.	works steadily	.61	.48	.02	.09	.39	16.	shows originality	.77	.66	.29	.24	.19
14.	meets deadlines	.77	.42	.16	.04	.36	4.	imaginative	.55	.50	.27	.14	.19
23.	thorough	.77	.66	.15	.03	.47	7.	independent	.69	.61	.33	.19	.17
58.	completes assignments	.61	.50	.17	.02	.33	68.	creative	.63	.59	.37	.15	.12
6.	industrious	.76	.64	.17	-.05	.32	40.	deep	.67	.41	.49	.19	.23
61.	performs to top of ability	.68	.58	-.09	-.11	.22	45.	open-minded	.61	.30	.57	.20	.16
26.	self-disciplined	.64	.14	.54	-.03	.29	77.	generally objective in forming opinions	.59	.37	.48	.20	.14
INTELLECTUAL ABILITY							69.	open to new experience	.53	.39	.48	.23	.09
49.	intellectually quick	.52	.79	.00	.11	.15	9.	flexible	.57	.34	.34	.12	.32
13.	above average	.73	.82	.00	.07	.05	41.	willing to take directions	.55	.29	.42	.07	.29
28.	good at analyzing	.70	.72	.10	.17	.14	59.	realistic in outlook	.51	.40	.24	.20	.25
25.	good grasp of abstract	.66	.63	.16	.22	.21	33.	willing to ask questions	.56	.45	.39	.23	.15
37.	makes good grades with ease	.61	.62	-.15	.12	.19	51.	high concern for welfare of others	.76	.15	.59	.14	.37
CONFORMITY							27.	altruistic	.68	.16	.45	.15	.32
42.	conforming	.67	-.10	-.13	-.20	.00	15.	interested in other.	.69	.15	.61	.13	.24
42.	orthodox in behavior	.52	.07	.00	-.21	.53	75.	high respect for human dignity	.47	.32	.56	.16	.03
24.	conventional	.67	-.29	-.17	-.17	.53	20.	socially mature	.71	.37	.37	.07	.43
56.	accepts majority values	.44	-.06	.12	-.09	.41	44.	sophisticated	.55	.27	.14	.04	.46
72.	has few idiosyncrasies	.42	-.14	-.12	.05	.37	74.	at home in college culture	.53	.45	.38	.16	.18
INTELLECTUAL VALUES							30.	leader among peers	.64	.30	.33	.10	.43
10.	broad intellectual interests	.75	.61	.22	.29	.28	18.	active in campus life	.55	.15	.31	.03	.43
9.	culturally rich	.65	.44	.20	.11	.35	66.	works well with others	.57	.24	.23	.05	.46
46.	reads widely	.55	.44	.32	.24	.25	54.	liked by peers	.60	.21	.43	.12	.36
64.	intellectually versatile	.65	.62	.28	.26	.14	11.	seldom worries	.51	.05	.10	-.02	.50
73.	high intellectual curiosity	.50	.70	.34	.21	.13	23.	calm	.51	.13	.11	-.05	.48
34.	interested in ideas	.69	.63	.49	.24	.00	65.	low need for reassurance	.45	.18	.11	.03	.40
21.	intellectually mature	.71	.73	.25	.15	.09	53.	stable	.65	.40	.19	-.01	.47
19.	honest	.71	.36	.59	.15	.21	35.	happy	.64	.24	.36	.00	.45
43.	acts ethically	.64	.29	.52	.11	.27	47.	good self-understanding	.54	.36	.45	.16	.15
67.	principled	.70	.36	.53	.18	.26	59.	positive family influence	.16	.11	.23	.13	.09
MOTIVATION							32.	personal goals clear	.51	.47	.24	.04	.37
6.	high motivation to achieve	.65	.61	.12	-.01	.26	STATUS-CONSCIOUSNESS						
3.	high interest in chosen field	.44	.44	.06	-.03	.14	42.	not status-conscious	.42	.08	.46	.09	.26
70.	a serious student	.71	.66	.26	.15	.17	5.	low need to stand out	.46	-.21	.64	.01	.40
22.	eager to learn	.78	.71	.30	.07	.17	5.	modest	.38	.05	.41	.07	.37
18.	values like those of faculty	.30	.40	.39	.12	.08							
INTELLIGENCE													
4.	pleasant	.72	.42	.56	.08	.30							
29.	likes to	.75	.35	.43	.13	.19							
65.	affair	.47	.77	.46	.09	.43							
17.	enjoying	.61	.70	.47	.12	.19							
21.	good sense of humor	.44	.37	.54	.11	.20							

Table 2  
Factor Loadings: Diagonal. Factoring with Vectors Placed Through GPA (I), Desirability (II), and SAT-V (III)

Item	Content	I (GPA)	II (90)	III (SAT-V)	Res Com
30. Freshman GPA		74	90	00	60
30. Kind of institution should admit		42	97	00	00
SAT-V		49	-22	53	00
SAT-M		29	-69	58	00
High School Rank		55	-09	-14	00
DEPENDABILITY					
2. works steadily		23	37	10	49
14. meets deadlines		16	43	15	33
38. thorough		34	58	13	40
52. completes undertakings		17	52	46	27
50. industrious		31	58	05	33
61. performs to top of ability		42	37	-01	34
26. self-disciplined		29	51	03	39
INTELLECTUAL ABILITY					
49. intellectually quick		52	11	18	25
13. above average		56	23	11	17
28. good at analyzing		47	61	23	14
35. good grasp of abstract		44	48	23	20
37. makes good grades with ease		49	29	15	25
1. high academic performance		42	52	-02	06
CONFORMITY					
47. conforming		-10	-05	-12	33
48. orthodox in behavior		04	07	-21	53
24. conventional		-24	-34	-13	53
50. accepts majority values		-11	-05	00	43
72. has few idiosyncrasies		01	24	-02	36
INTELLECTUAL VALUES					
16. broad intellectual interests		34	61	31	24
2. culturally rich		22	46	36	24
46. reads widely		37	40	29	22
64. intellectually versatile		52	32	27	12
73. high intellectual curiosity		44	62	22	12
34. interested in ideas		32	73	37	60
81. intellectually mature		40	69	34	07
ETHICALITY					
29. honest		12	67	11	35
43. acts ethically		13	48	06	39
57. principled		15	56	21	32
MOTIVATION					
76. high motivation to achieve		34	56	06	28
3. high interest in classroom field		27	45	03	12
36. a serious student		59	66	19	16
22. eager to learn		37	69	17	14
54. values fine those of faculty		22	42	10	16
INTELLECT					
29. pleasant		09	47	08	39
16. likeable		14	64	12	24
65. capable		02	47	12	48
17. self-assertive		69	42	24	17
34. good sense of humor		42	51	22	24
EXTRAVERSION					
42. extraverted		-01	14	02	63
6. gregarious		00	15	01	66
71. placid		-23	-13	-08	50
63. optimistic		06	32	11	42
79. high level of physical energy		12	36	00	23
SELF-SUFFICIENCY/CREATIVITY					
21. self-directing		31	44	12	28
15. shows originality		40	59	33	15
4. imag. alive		38	60	31	16
7. independent		32	47	26	15
23. creative		34	59	25	16
40. deep		31	62	20	11
OPEN-MINDEDNESS					
49. open-minded		19	56	21	27
57. fair-minded		16	50	14	31
69. open to new experience		23	49	15	24
77. generally objective in forming opinions		19	54	25	14
9. flexible		12	46	19	31
11. willing to take directions		07	47	11	32
58. realistic in outlook		19	43	-05	28
33. willing to ask questions		24	52	26	16
AUTISM					
21. high concern for welfare of others		01	44	10	50
27. altruistic		08	36	11	44
15. interested in others		-01	47	11	42
79. high respect for human dignity		09	57	19	11
MATURITY					
30. socially mature		11	53	16	41
44. sophisticated		15	57	08	45
74. at home in college culture		25	50	14	20
POPULARITY					
30. leader among peers		17	38	08	46
18. active in campus life		04	29	02	47
66. works well with others		09	34	14	44
3. liked by peers		05	39	10	42
ANXIETY					
11. seldom worries		03	08	-06	50
23. calm		04	16	-06	48
75. low need for reassurance		15	17	-03	41
63. stable		19	38	05	47
35. happy		04	41	04	47
SELF-INSIGHT					
47. good self-understanding		12	52	21	20
59. positive family influence		04	21	16	12
20. personal goals clear		27	45	04	24
STATUS-CENTREDNESS					
39. not status-centered		-05	31	11	31
26. low need to stand out		-13	-11	-05	43
35. modest		-03	32	08	47

desirability apart from performance--has a much smaller portion of variance left to define it. Thirty of the other rating-scale items load higher on Factor II than does residual desirability. Second, many of the clusters of items which loaded higher on Factor II than on I in the original analysis (Table 2) now give the higher loadings to Factor I. In fact, the loadings on Factor I gain and the loadings on Factor II lose, in most cases. Notable exceptions where loadings on Factor II gain in the present analysis include the following variables: honest, acts ethically, likable, affable, fair-minded, high concern for welfare of others, altruistic, interested in others, liked by peers, not status-centered, and modest. Dependability variables become almost entirely a matter of perception of performance, as do ratings of traits grouped under intellectual ability, motivation, and self-sufficiency/creativity. Ratings under ethicality, likableness, and altruism remain, from the original group, as the only areas where loadings on performance tend to be low and loadings on the desirability residual tend to be high.

Instrument factors surely account for part of the different results for rating-scale variables in the present analysis. Halo in the ratings probably accounts in large part for the fact that more variance is absorbed in a first factor defined by a criterion internal to the instrument. Considering the low loading of the desirability criterion on the factor it defines and the fact that many rating-scale variables load higher on this factor than does the desirability criterion, any generalizations should be tempered by the obvious difficulties faculty have in separating desirability from perception of performance that may in this situation stretch the meaning of the second factor to other areas.

It is interesting to note that SAT and High School Rank do not relate as highly to the instructor's perception of performance as to the freshman grade-point average, although greater reliability of FGPA could, of course, account for this. Nevertheless, the relationship of SAT and HSR to desirability apart from performance is, as before, negative, as is now the relationship of FGPA.

Whatever may constitute Factor II, actual grade performance is not recognized in any positive sense; indeed, this would not be expected. This residual desirability factor, by its construction, defines a student not recognized for his performance, but who is desirable on other grounds. This student emerges as one of lower actual performance and lower SAT scores, but who stands out as honest and ethical, pleasant and cooperative, interested in and concerned for others, and not status-centered. He is a comfortable person to be with, though (in traits not associated with performance) neither particularly extraverted nor introverted, conforming nor nonconforming, anxious nor free from anxiety. He is not fraught with problems that make him appear anxiety-ridden, unorthodox or odd, unpopular, unevenly motivated or uniquely creative; he appears to be a pretty stable, pleasant, noncontroversial sort, valued for the fact that he is not an irritant, or because he is on the right side of the broader societal values.

Of greater import in this analysis, perhaps, is the insight it provides about the faculty formulation of "good" performance. Loadings on Factor I, perceptions of performance, show that faculty believe that those who perform are industrious and work oriented; able (however ability may be conceived); interested in ideas or intellectually curious; motivated, serious, and eager to learn; and imaginative, independently creative. They do not, as noted,

relate perceptions of the student's performance to conformity, ethicality, likability, extraversion, popularity, anxiety level, or altruism. Students who are perceived as likable and cooperative, honest, or nobly altruistic are nice to have around, regardless of performance level; nevertheless, such perceptions do not bias evaluation of academic performance.

Finally, brief note may be taken of the third factor, defined by the residual variance in SAT-V (and, incidentally, SAT-M) apart from that related to perception of performance and desirability. Loadings of rating-scale variables on this factor are generally low, with the major proportion of the variance absorbed by the first two factors. The highest loadings, however, occur for variables in the areas of intellectual values, creativity, and open-mindedness, for the analytical ability and grasp of abstract variables under intellectual ability, and for some conformity variables. This suggests that the substantial SAT residual may in part still be visible to the faculty in these terms. The intellectual values area may indicate students who deploy their abilities, interests, and energies in directions different from those involved in course work or manifestations of desirability, and the creativity variables may reflect similarly unrelated acts or events in which verbal or symbolic skills are visibly reflected.

The loadings of the SAT residual in the area of open-mindedness, if real, are more difficult to interpret. The best conjecture would seem to be that brighter students may have more interest in intellectual inquiry and exhibit it through continued receptivity to new ideas. The fact that this variance goes beyond performance and desirability may be due to the student's

going beyond what would satisfy the instructor: The brighter student may continue to seek and incorporate new evidence even though the instructor is satisfied.

#### Summary

A previous study had employed the diagonal method of factoring to partial out that portion of the variance in faculty ratings (of students on a variety of traits) that is related to academic performance, to permit identification of reliable remaining variance related to ratings of general desirability. The present study employed the same data, but focused on desirability apart from raters' perceptions of academic performance rather than on desirability apart from actual performance. Two questions prompted such an analysis: (1) could previous results, based upon a consensus, or average academic performance, be further illuminated by going directly to the rater's perception of performance?, and (2) what traits do faculty see as compatible with or concomitants of their perception of performance?

The results tend to show an absorption in the faculty perception of performance of much of the variance previously associated with dependability, intellectual ability and values, motivation, self-sufficiency/creativity, and maturity in defining desirability apart from academic performance. The results tend, however, to verify or accentuate the contribution of other traits, notably ethicality, likableness, open-mindedness, and altruism. It does appear that desirability is highly related to perception of academic performance, however, and that other areas normally expected to make an honest contribution to performance (e.g., dependability, intellectual ability and values, motivation, and self-sufficiency/creativity) are perceived by

the faculty to do so. Finally, there is remaining reliable variance in SAT and actual grades, as well as in such previously established areas as conformity and extraversion, which is related neither to perception of performance nor desirability.

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