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TEACHERS' PERCEPTIONS OF PUPIL PERSONALITY

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Each of 165 teachers rated one randomly selected eleven year old pupil from his/her class on a series of twenty personality ratings Factor analysis of the ratings identified four independent factors satisfactory classroom behaviour, group leadership health-extraversion and a minor aesthetic factor No conclusive evidence was found to indicate quantitative or qualitative differences in the constructs used by teachers in rating boys and girls

It is often assumed that a pupil's school progress is evaluated strictly in terms of his attainment in different subject areas While attainment plays an important role in such evaluations (25, 28) there is evidence which indicates that teachers are also strongly influenced by other student characteristics, particularly personality ones, in their evaluations (11, 28, 32)

Personality characteristics of pupils are common topics of conversation among teachers and an extensive range of words is used to describe these characteristics (39) Descriptive labels such as 'intelligent', 'creative', 'good worker', 'steady' and 'likeable' are among the more popular It is highly unlikely that the variety of labels used by different teachers signifies the existence of many independent personality traits Rather it seems more reasonable to assume that such variety represents a much smaller number of traits which have been assigned different labels by individual teachers In fact, the number of independent traits used by teachers to describe their pupils may be quite small (6, 39) The primary purpose of the present paper is to determine the number and nature of independent traits used by Irish teachers when rating pupil personality

The identification of the constructs used by teachers to evaluate pupils is clearly an important area of research In a recent Irish study, based on the data used in the present investigation, it was found that more than 50 per cent of the variance in class place (i e , the pupil's rank in class over all subjects) was accounted for by perceived personality characteristics of pupils,

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a proportion of that was higher than that accounted for by eight cognitive variables (11) Furthermore, several studies have observed a relationship between teacher perception and expectancy on the one hand and teacher behaviour, pupil behaviour in class and pupil attainment on the other (1, 3, 28, 33, 34)

Factor analytic studies which have focussed on teachers' ratings of pupil personality have produced fairly consistent findings Hallworth (12) identified two factors which he described as 'emotional stability' or 'reliability conscientiousness', and 'social extraversion' He claimed that these factors are quite similar to Eysenck's (1957) 'neuroticism-emotional stability' and 'introversion-extraversion' factors and to Cattell's (4) second order factors of 'anxiety adjustment' and ' introversion-extraversion' Further work by Hallworth (13), in which the items from his initial study were rated with those of Osgood's (30) dimensions of meaning, showed that his original 'emotional stability' factor correlated highly with Osgood's evaluation scale and that the 'social extraversion scale' correlated highly with Osgood's activity scale More recently, Herbert's (15) work has produced evidence of the existence of five factors and his data suggest that, when presented with a sufficient range of items, teachers have the capability of making fine discriminations in rating pupil personality However, when Herbert's data were subjected to a second-order factor analysis two factors similar to those identified by Hallworth and Osgood and other earlier research workers were identified Research to date therefore, points to two fairly well defined factors as underlying teacher ratings These have been identified in both British and American studies The first factor can be termed 'a general classroom behaviour factor' while the second describes perceived social traits of pupils

The methods of analyses employed in the studies we have been considering assume that teachers use similar criteria in rating boys and girls Such may not be the case An alternative plausible assumption is that the criteria used by teachers to rate boys differ from those used to rate girls For one thing, boys may vary more than girls on many biological, physiological and educational variables (22) Secondly, within classrooms, boys are more salient, they tend to receive far more criticisms and warnings than girls (16, 21, 24), and they are more often perceived as a major source of misconduct (10, 16) It was in the light of evidence such as this that it was decided to examine the number and types of constructs which teachers use in rating boys to determine if they differ quantitatively and qualitatively from those used in rating girls If no differences are found to exist, the data from ratings of both sexes may be combined to examine the factors underlying teachers' perceptions of pupils' personality in general

METHOD

Sample

A stratified random sample of 500 eleven year-old children attending Irish primary schools was selected from a larger sample of over 2,000 children, which had been selected on being representative of eleven year old pupils in Ireland A year later, a postal questionnaire which sought among other things, teachers' ratings of pupil personality, was sent to their teachers Completed personality rating schedules were returned for each of the 500 pupils by 165 individual teachers For each teacher, the rating of one pupil was selected at random At the time of the administration of the personality schedules, seven pupils were enrolled in fourth standard, 37 in fifth, 92 in sixth, while the remaining 29 had transferred to post primary school Of the total of 165 teachers ratings, 92 applied to boys and 73 to girls

Variables investigated

Teachers were asked to rate each of their pupils on each of the following twenty separate personality traits on a five point scale (i) keenness to get on, (ii) enquiring mind, (iii) achievement tendencies, (iv) leadership, (v) concentration on own activities, (vi) self confidence, (vii) dominance, (viii) creativity, (ix) dependence, (x) deference, (xi) gregariousness, (xii) common sense, (xiii) originality, (xiv) sense of humour, (xv) popularity, (xvi) sensitivity to approval/disapproval, (xvii) appreciation of beauty, (xviii) intelligence, (xix) health, (xx) physical energy Ten of the traits (ii–xi) were taken from Lightfoot's (20) study of bright and gifted children Traits (xii) through (xx) were used in Terman's (37) and Parkyn's (31) studies of children of high intelligence Trait (i) was added for the present investigation For each trait, five phrases were placed at approximately equal intervals on a line, which allowed the teacher to indicate the degree to which he/she considered the trait to be possessed by a pupil The initial and final phrases represented both poles of the trait The following example illustrates the format of each item

SELF–CONFIDENCE (assured self reliant)

Completely self assured	Rarely seeks outside help	Average belief in own capacities	Usually looks for help when problems arise	Lacks self-confidence entirely

In an effort to ensure comparability of ratings, teachers were asked to consider the traits only in light of the descriptions given below the rating scales They were advised not to consider a trait as desirable or undesirable but simply to indicate whether the pupil was high or low in the possession of it In making their judgements, they were requested to compare the pupil being rated with the average child of all the children of the same age they had known Teachers indicated their judgements by placing an X at any point on the line under the phrases describing the trait Scoring of the completed personality ratings was carried out by dividing the line into five equal segments and by assigning values ranging from one to five to each trait A score of five indicated that the pupil was considered to possess the trait to a high degree

A reliability study of the twenty personality ratings used in the present study was carried out as part of a separate investigation (29) Sixty children of high verbal ability from the original larger sample were selected randomly nine months after the initial investigation, and their teachers were asked to rate them again using an identical questionnaire Separate Pearson product moment correlations were computed for each of the twenty traits The correlations varied from 34 to 76, the median correl ation value was 58 Highest correlations were obtained for achievement tendencies, intelligence, health and concentration, while the lowest correl ations were for dependence and popularity The re administration of the questionaire was complicated by the fact that in some cases the teacher had to rely on memory for the second rating, since during the nine-month interval the pupil had moved on to the next class or had even left the school

RESULTS

Descriptive statistics of the personality ratings for boys and girls are presented in Table 1 Chi square analyses were carried out to determine the significance of the relationship between each personality rating and pupil's sex Significant relationships were found for two variables enquiring mind and health For both variables, boys tended to receive higher ratings than girls

Separate factor analyses of ratmgs of boys and of girls were carried out The purpose of these separate analyses was twofold firstly, to determine separately for boys and for girls the nature of the distinctive constructs or terms of reference underlying teachers' ratings, and secondly, to determine the number of the distinctive constructs used by teachers in rating boys as compared with rating girls

TABLE 1

MEANS AND STANDARD DEVIATIONS OF TEACHER–RATED PUPIL PERSONALITY TRAITS

	Boys (N 92)		Girls (N 73)	
	$\bar{X}$	SD	$\bar{X}$	SD
Keenness to get on	3 76	95	3 56	1 05
Enquiring Mind	3 26	82	3 04	93*
Achievement Tendencies	2 98	91	3 01	1 05
Leadership	2 76	87	2 63	95
Concentration	3 10	88	2 99	1 02
Self-Confidence	3 03	98	2 84	1 00
Dominance	2 60	76	2 64	90
Creativity	2 78	96	2 64	98
Dependence	2 87	74	3 04	84
Deference	3 21	96	3 18	1 10
Gregariousness	3 47	98	3 26	93
Common Sense	3 30	64	3 18	93
Originality	3 02	65	2 97	80
Sense of Humour	3 34	73	3 23	79
Popularity	3 38	69	3 22	73
Sensitivity	3 39	73	3 32	80
Appreciation of Beauty	2 90	73	3 11	83
Intelligence	3 10	73	3 10	90
Health	3 60	95	3 25	83*
Physical Energy	3 26	72	3 05	74

* Significant X^2 $p < 001$

Table 2 presents the table of intercorrelations among the personality ratings, with ratings for boys listed above the diagonal and girls below the diagonal The statistical significance of each correlation matrix was determined by means of Bartlett's (2) test The resultant chi square values (for boys $X^2 = 768\ 04$, $df = 190$, $p < 001$, for girls $X^2 = 756\ 97$, $df = 190$, $p < 001$) indicated that it was reasonable to factor analyse both matrices (17)

Since there is no completely satisfactory rule or mathematical procedure for determining the number of factors (14), two independent tests, the Kaiser and the scree, were applied to the characteristic roots of the unreduced correlation matrix for each set of data The application of the Kaiser criterion resulted in the identification of a four factor solution for boys and a five factor solution for girls Extensive experience with both tests has convinced Cattell (5) that the Kaiser test cuts off too soon when the number of variables are few ($n < 20$) and too late when these are many ($n > 50$) The scree test on the other hand, surprisingly in the light of

TABLE 2

INTERCORRELATIONS OF TEACHER–RATED PUPIL PERSONALITY TRAITS*

		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
Keeness to get on	1		67	68	34	63	47	19	44	45	11	03	46	56	24	22	37	49	54	10	15
Enquiring Mind	2	82		66	40	63	51	35	49	-57	26	08	55	61	25	15	27	54	53	19	14
Achievement Tendencies	3	74	79		38	70	49	31	43	42	23	13	54	63	37	26	28	41	57	28	31
Leadership	4	32	44	55		43	55	57	45	42	34	22	41	42	46	41	08	12	44	31	48
Concentration	5	72	73	71	37		52	26	47	-50	10	09	61	62	26	21	27	39	66	13	24
Self-Confidence	6	35	44	44	51	53		40	47	60	-36	09	54	50	34	27	11	34	57	10	30
Dominance	7	15	25	33	67	16	43		45	39	34	32	30	36	47	25	13	21	27	26	33
Creativity	8	44	49	47	39	37	39	34		41	24	17	48	63	40	36	01	38	52	19	27
Dependence	9	51	-46	44	45	47	57	33	52		35	20	42	57	22	-26	07	31	40	-29	34
Deference	10	12	16	23	32	04	16	45	24	10		23	21	19	29	-25	12	07	28	-29	22
Gregariousness	11	10	12	25	52	18	12	41	16	-19	18		21	12	33	34	-14	05	00	35	34
Common Sense	12	56	49	61	45	51	31	26	44	-49	10	35		57	36	40	19	46	52	26	28
Originality	13	41	49	56	39	39	26	33	61	-31	-36	18	53		29	30	22	36	56	18	34
Sense of Humour	14	16	25	36	60	18	26	47	45	14	35	50	28	34		55	08	29	27	28	31
Popularity	15	14	11	32	34	19	09	27	36	-20	17	51	41	34	44		03	18	25	32	44
Sensitivity	16	45	41	38	25	30	21	20	38	-27	08	00	30	21	12	00		36	22	10	01
Appreciation of Beauty	17	52	44	54	42	25	29	31	55	39	33	25	46	51	51	42	37		45	07	03
Intelligence	18	-59	-62-	-72	-46	-56	-37-	-26	-64	43	33	-24	-62	-66	-49	-39	-23	-60		-25	-26
Health	19	06	13	28	19	10	07	14	14	07	23	26	41	37	19	28	06	08	40		60
Physical Energy	20	14	22	30	46	15	07	46	35	09	-28	38	27	40	59	34	11	35	41	54	

* Correlations for boys analysis are above the diagonal
Correlations for girls analysis are below the diagonal

Cattell's observations, suggested a three factor solution for boys and a four factor solution for girls Since the Kaiser test seemed to identify the more psychologically meaningful set of factors, it was decided to opt for a four factor solution for boys and a five factor solution for girls

The matrices of intercorrelations were subjected to separate factor analyses in which commonality estimates were inserted on the diagonals Varimax, equimax and oblique rotations were performed In each instance, the varimax rotation was selected as its pattern of factor loadings best satisfied criteria of simple structure (38) Factor loadings for both analyses are presented in Table 3 An examination of the separate analyses indicates that loadings on the first factor for boys closely resemble those on the first factor for girls To a somewhat lesser extent, factors two, three and four for boys possess many of the attributes of factors two, five and four respectively for girls The third factor for girls appears to have no parallel in the solution for boys A total of 53 3 per cent of variance was accounted for in the analysis for boys and 62 1 per cent in the analysis for girls

TABLE 3

TEACHER RATINGS OF BOYS AND GIRLS
VARIMAX FACTOR LOADINGS

	BOYS					GIRLS					
VARIABLES	1	2	3	4	h^2	1	2	3	4	5	h^2
Keeness to get on	*79*	13	04	06	65	*85*	03	24	03	01	77
Enquiring Mind	*74*	33	04	05	66	*83*	13	21	02	11	76
Achievement Tendencies	*75*	18	24	11	66	*77*	16	25	18	23	77
Leadership	23	*62*	30	27	59	*37*	*66*	12	41	07	76
Concentration	*77*	27	13	00	68	*85*	05	07	13	09	76
Self-Confidence	47	*63*	04	12	63	*53*	47	01	00	04	51
Dominance	17	48	17	38	43	13	*78*	16	22	07	71
Creativity	45	43	11	28	48	44	23	*55*	13	07	57
Dependence	44	*52*	23	01	52	*59*	27	10	11	05	44
Deference	05	45	20	18	28	03	41	35	03	23	35
Gregariousness	05	15	38	34	28	07	27	02	*76*	12	67
Common Sense	*60*	27	18	25	53	*59*	03	19	35	29	59
Originality	*66*	36	19	08	61	40	16	*51*	10	38	60
Humour	20	22	18	*76*	69	08	42	42	49	11	61
Popularity	16	17	36	*51*	45	11	05	28	*62*	17	50
Sensitivity	47	23	-12	08	29	43	07	22	01	14	26
Appreciation of Beauty	*62*	01	14	28	48	37	15	*68*	28	04	71
Intelligence	*64*	34	13	07	55	*58*	11	*50*	20	37	77
Health	08	12	*69*	15	53	06	06	03	18	*86*	77
Physical Energy	11	23	*76*	14	67	03	34	31	33	45	53
Variance extracted	24 6	12 2	8 9	7 6		24 5	10 2	10 3	9 5	7 6	
Percent of total variance					53 3						62 1

The separate factor solutions were compared to determine if the same underlying factors could be considered accountable for the relationships among the personality variables in both samples In order to carry out this analysis, factor loadings for boys were rotated to create a comparison matrix (35) which in effect represented the best linear prediction of the varimax factor matrix for girls from the factor matrix for boys Coefficients of congruence (14) were then computed to determine the degree of factorial similarity between the comparison (boys) matrix and the original varimax solution for girls

TABLE 4

COEFFICIENTS OF CONGRUENCE BETWEEN ROTATED VARIMAX SOLUTION FOR BOYS AND VARIMAX SOLUTION FOR GIRLS

		FACTORS				
Boys	Girls	I	II	III	IV	V
I		*98*	45	69	37	40
II			*91*	58	70	45
III				44	66	87
IV					*91*	63

While there is no statistical test associated with these coefficients, a common practice is to accept two factors as equivalent if the index of their factorial similarity is 90 or greater (27) The coefficients of congruence reported in Table 4 support the previous evidence of considerable similarity between the two factor solutions Three of the four rotated factors for boys had coefficients greater than 90 and therefore could be considered matches for the first, second and fourth factors for girls The third rotated factor for boys had a coefficient of 87 with the third factor for girls

Given the degree of similarity between both solutions and also considering the size of the respective samples, and the size of the minor factors, there seemed to be little justification for assuming that different underlying factors account for the relationships among the variables in the separate samples Since the combined sample was more likely to yield a more stable factor solution than either of the previous analyses, it was decided to factor analyse both sets of personality ratings together to determine the nature of the major dimensions of the teachers' ratings of pupil personality

A principal factor analysis in which four factors were specified (based on the Kaiser criterion) was carried out on the ratings for the total sample

The factor loadings were rotated to orthogonal varimax criteria to simplify the factor structure Of the total of 54 per cent of item variance accounted for by the rotated solution, 25 8 per cent was attributable to the first factor, and 11 8 per cent, 11 0 per cent and 5 2 per cent to the second, third and fourth factors respectively Varimax factor loadings are presented in Table 5 Loadings with absolute values greater than 5 have been italicised

TABLE 5

TEACHER–RATED PUPIL PERSONALITY RATINGS
VARIMAX FACTOR LOADINGS

	FACTOR LOADINGS				
VARIABLES	I	II	III	IV	h^2
Keeness to get on	*83*	06	01	13	71
Enquiring mind	*81*	20	05	06	71
Concentration	*81*	16	08	06	68
Achievement Tendencies	*77*	17	23	15	70
Intelligence	*67*	18	28	24	62
Common Sense	*61*	16	33	17	53
Originality	*59*	22	28	21	52
Dependence	*55*	40	11	07	48
Self Confidence	*52*	*56*	00	08	59
Dominance	14	*70*	20	16	57
Leadership	32	*68*	31	05	66
Health	13	04	*77*	13	63
Physical Energy	13	29	*66*	05	54
Appreciation of Beauty	48	14	02	*57*	58
Sense of Humour	12	46	39	46	59
Popularity	14	24	48	32	41
Creativity	49	35	20	29	49
Sensitivity	40	-01	13	23	23
Gregariousness	00	31	45	12	32
Deference	08	38	25	11	23
Variance extracted	25 8	11 8	11 0	5 2	
Percent of total variance					53 8

Factor I, clearly the most important one, describes what may be termed good student behaviour, since it emphasises the characteristics normally associated with satisfactory classroom behaviour Personality-motivational type variables rather than purely cognitive ones have the highest loadings A pupil rated highly on this factor generally is keen to get on, has an enquiring mind, works intently and strives to excel The factor has a minor cognitive component as evidenced by the moderate loadings on intelligence, common sense and originality The additional minor loadings for dependence (negative) and self-confidence, along with the loadings

of the previously noted variables, suggest that a pupil with a high score on this factor is likely to require little teacher supervision

Factor II is a social one with moderate positive loadings on dominance, leadership and self confidence The relatively low loading on popularity (24) indicates that popularity with other pupils is not a consideration in the identification of this apparently domineering, confident and perhaps tough minded child who attains a prominent position in his social group

Factor III refers mainly to health and physical energy and to a lesser extent to popularity and gregariousness Physically active extraverted type pupils would receive high scores on this factor

Factor IV is relatively poorly defined and may be described as a minor aesthetic factor Only one variable, appreciation of beauty, loads above 5 on this factor

The commonality values (h^2) listed in Table 5 indicate that a considerable portion of the variance of some of the variables used in the factor analysis is unrelated to the four factors which were identified This is particularly true of variables relating to popularity, gregariousness, deference and sensitivity to approval and disapproval

DISCUSSION

The evidence from the present study shows that most of the variation of Irish teachers' ratings of twenty pupil personality traits was attributable to four independent factors The identified factors were satisfactory classroom behaviour, group leadership, health-extraversion and a minor aesthetic one

Satisfactory classroom behaviour was clearly the most important of these factors It closely resembles Hallworth's 'good pupil evaluation' factor which was derived from English teachers' ratings (13) The identification of such a factor suggests that teachers tend to evaluate pupils' personalities primarily in terms of their concepts of acceptable classroom behaviour Such behaviour involves both desirable attitudes towards learning on the part of the pupil together with, though to a lesser extent, a number of important cognitive characteristics If we accept Brophy and Goods' (3) portrayal of a teacher's day as a frantic effort to keep up with events over which he has only partial control, then it is reasonable to expect that pupils' classroom behaviour would emerge as a major factor From the teacher's perspective, the most important pupil personality attributes appear to be those which have some bearing on the type of classroom environment which is most conducive to promoting scholastic achievement

The second factor indicates that teachers evaluate pupils in terms of their group leadership characteristics Whereas the first factor focusses on an aspect of the relationship between the teacher and the pupil, the second one is more concerned with the position of a pupil's standing within a group Teachers' ratings on this factor are possibly determined by their observations, both inside and outside of the classroom

Independently of group leadership qualities, teachers apparently judge how active and extraverted pupils are The third factor identified in the present study is quite similar in structure to Hallworth's (13) 'activity social-extraversion' factor As in the case of our second factor, it is likely that teachers in rating this factor take into account the quality of inter action among pupils both inside and outside of the classroom

Factor analysis can only find out relationships between variables that it is given to analyse Since teachers were presented with the twenty personality descriptions it is conceivable that other variables not considered in the present study may have some significant bearing on how teachers discriminate among children The inclusion of additional variables in future research is needed, especially to clarify the nature of the fourth factor which has been tentatively described as 'aesthetic'

In general, the factors which underlie teachers' ratings of boys closely match four factors associated with their ratings of girls The existence of a further minor factor in the case of ratings of girls was not considered as providing sufficient evidence to conclude that numerical and qualitative differences exist in teachers' ratings of boys and girls, given the smallness of the sample Thus, evidence from our study provides little support for conclusions (23, 26) that girls are perceived in a less analytic way than boys It might be argued that if more of the raters in the present study had been female, our findings would have more closely approximated American and British findings, which were based on a larger proportion of female teachers than we had in our sample However, this does not seem very likely, given the existence of evidence that, on the whole, men and women teachers do not discriminate in their classroom behaviour in their treatment (18) and in their ratings of boys and girls (3, 19)

In conclusion, it should be noted that the major factors identified in the present study do not necessarily describe pupils' personalities accurately For example, there may be little agreement between teachers' ratings of pupils and the pupils' own responses on personality inventories (8, 9, 36) However, teachers' perceptions in themselves may be important since they seem to play a significant role in the assessment of pupil achievement (11, 28, 32) Given that situation, the identification of the factors underlying teachers' percept ions of pupils, as identified in the present study, is hardly without significance

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