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ABSTRACT
        Situated Attainment (SA) is a within-class concept that
allows the exploration of why teachers award some students higher or lower
grades than their intelligence might warrant. A student's SA is operationally
defined as the difference in ranks between the grade awarded by the teacher
and the student's intelligence quotient (IQ). For this initial exploration of
the concept, 9 classes of grade 9 students were selected, a total of 319.
These students responded to an attitude questionnaire and a subset of
culturally and psychometrically appropriate IQ questions from the General
Ability Tests 2. Half-year results from which grades were derived were also
recorded. The theoretical assumptions if using class as the unit of analysis,
school as the unit of analysis, and student as the unit of analysis were
supported, and further analysis using the SA metric showed that teachers were
not gender biased in their grading of males and females relative to their
IQs. The SA analysis revealed teachers extreme grading bias with respect to
the student's age (95.8%) and a bias toward students' attitudes. The study
reveals the negative effect of continued underachievement on students'
self-esteem and shows that 62.5% of student dissatisfaction with low grades
was the result of underachievement rather than lack of ability. (Contains 5
tables and 39 references.) (SLD)

Introduction and Initial Exploration of 'Situated Attainment': Differences in Ranked IQs and in Class Attainment

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Introduction and initial exploration of 'Situated Attainment': Differences in ranked IQs and in-class attainment.

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Abstract

If all else were equal within a classroom we might expect that children's intelligence would be a strong determinant of their attainment. However, there are often other factors that come into play that considerably reduce the correlations between I.Q. and Attainment so that, in a particular classroom situation, a student's actual academic attainment may be more or less that we might have expected based on his or her I.Q. scores. 'Situated Attainment' is a within-class concept that allows us to explore why teachers award some students higher or lower grades than their intelligences might warrant.

A student's Situated Attainment (SA) is operationally defined as the difference in ranks between the grade awarded to the student by the teacher and the student's intelligence quotient. Situated Attainment is the difference between Grade rank and IQ rank within the class: SA=RG-RIQ. When students attain over their IQ expectation, their SA is positive. When students attain below their IQ expectation, their SA is negative. It was postulated that teachers' and students' value judgements are made mainly relative to class norms so that using the class as the unit of analysis (CUA) would reveal relationships that were less obvious when the individual was used as the unit of analysis (IUA) or the school was used as the unit of analysis (SUA).

For this initial exploration of the concept, nine classes of Grade 9 students were selected, one from each of nine schools (n=319). These students, 127 males and 192 females of average age 14 years 5 months, responded to an attitude questionnaire and a sub-set of culturally and psychometrically appropriate I.Q. questions from the standardized General Ability Tests 2 (GAT-2). The students' half-year test results, from which their Grades are derived, were also recorded. The I.Q. scores were calculated and within each class, the students' I.Q. scores and their grade attainments were ranked so that their SAs could be calculated.

The theoretical assumptions of using CUA, SUA and IUA were supported, and further analysis using the SA metric showed that teachers were not gender biased in their grading of males and females relative to their IQs. The SA analysis, however, revealed teachers' extreme grading bias with respect to student's age (95.8%) and a bias towards student's attitudes. It revealed the negative effect of continued underachievement on students' self-esteem and showed that 62.5% of student dissatisfaction with low grades was due to underachievement rather than lack of ability.

Situational factors that affect grades awarded by teachers

Teachers' grading practices vary greatly and, particularly when incorporating alternative assessments, are likely to involve more subjective value judgments (Frary, Cross, & Weber, 1993; Plake, & Impara, 1993). Teachers' grading is a mostly private practice that Brookhart, refers to as "hodgepodge grade of attitude, effort, and achievement" (1991, p. 36). For example, the literature reports that teachers' grading is affected by the student's temperament (Holbrook, 1982), how independent, tidy and attractive a student is (Clifford, 1975; Ross, & Salvia, 1975), and the teacher's personal relationship with the student (Pedulla, Airasian, & Madaus, 1980; Doherty, & Conolly, 1985). Interestingly, it is not necessarily the attractive students who are over-graded. For example, Sparacino and Hansell (1979) found a negative correlation between physical attractiveness and Grade Point Average.

Because grades are so dependent on teachers' values, researchers have chosen to use more 'objective' standardized measures for comparisons across classes and schools. Wentzel (1993) noted that grades reflect the social-emotional context of the classroom, such as teacher preference. In her 1993 study "Does Being Good Make the Grade? Social Behavior and Academic Competence in Middle School" Wentzel found that pro-social behaviour was a strong predictor of grades, but not standardized scores. Similarly, Schaefer and McDermott (1999) found that grades were significantly related to social behavior whereas standardized test scores related significantly only to IQ scores. Bennett, Gottesman, Rock, and Cerullo (1993), indicated that grades were influenced by gender and teacher perceptions of behavior. In a longitudinal study (Feldhusen, Thurston, & Benning (1970) with 384 least 'socially approved' third and sixth graders, positive social skills were found to correlate with grades over a 5 year period. Malecki (1998) also found that ratings of students' social skills predicted academic achievement in the following term.

Teachers' grade evaluations may be influenced by many situational factors. For example, Yarborough and Johnson (1980) found that girls' superior language and spelling achievement, coupled with their affective advantages, could be mistaken for superior reading skills. This is consistent with Hartley, (1982) who also found that teachers rated girls's reading higher than boys'. This teacher gender bias towards girls has been found even when girls and boys have the same reading ability (Ross, & Jackson, 1991).

There have been many and varied conformations of Rosenthal's and Jacobson's classic 1968 study showing how teachers' perceptions of children influenced the their judgements (Babad, 1993; Brophy, 1983; Jussim, 1986, 1989; Weinstein, 1993). Race, ethnicity and SES are such factors that have been found to influence teachers' judgement of children (Baron, Tom, & Cooper, 1985; Hall, Howe, Merkel, & Lederman 1986). In a 1983 metastudy of 16 research results, Dusek and Joseph concluded that race and social class were major influences on teachers' judgements. This was confirmed in an experiment by McCombs and Gay (1988) who manipulated information on students' race, class and IQ to influence teachers' (n=80) evaluations of pictures of a White child and an Hispanic child.

The many situational factors that affect the grades awarded by a teacher makes such grades more suitable for comparison with other in-class grades awarded by the same teacher and less appropriate for wider comparison.

Arguments for the 'class' as the unit of analysis

If all else were equal, we might expect that students' IQs were good predictors of their in-class grades (Lassiter, 1995; Poteat, Wuensch, & Gregg, 1988; Rodriguez, Prewitt, & Joseph, 1990). Interestingly, many measurement courses use concocted IQ and Grade data, or data from an academically homogeneous groups, for correlation exercises that illustrate the expectation that IQ and Grades are correlated. However, although there is a large literature on the use of standardized measures to predict future grades, such as the use of IQ and SAT scores to predict College grades (Bridgeman, Mccamley-Jenkins, & Ervin, 2000; Carvajal, & Pauls, 1995), there is comparatively little literature reporting significant correlations between individuals' standardized measures and in-class grades across multi-school populations. In practice, situational variables can intervene to enhance or degrade performance, so that the grade percentage attained on a particular assignment may be higher or lower than that predicted by academic ability alone (Boulon-Diaz, 1992; Cuppens, 1967; Konarzewski, 1993; Sternberg, 1996). It is of some concern to educationists to identify situational variables that might act systematically to reduce grade scores of individuals or groups to levels below those justified by their abilities. 'Situated Attainment' is a within-class metric that describes the difference between expected and actual within-class performance. It may be used to identify cases where situational variables may have intervened to influence performance scores, positively or negatively, and it may be used to explore the nature of these influences.

Children and teachers naturally norm their educational value judgements in the context of their class, as their extensive time and involvement within their class environment can be expected to have a dominant influence on their evaluative experiences. For example, for socio-pedagogic reasons of motivation, self-esteem and accountability a teacher of a class students who are very below the academic average is unlikely to award ~gnment percentage grades to the whole class that are correspondingly very low. Similarly, a teacher of a

class of students who are very above academic average is unlikely to award assignment grades to the whole class that are correspondingly very high. Hence, by taking the individual as the unit of analysis we would not expect to find that standardised academic ability and teacher awarded grades would correlate highly across school populations of varied academic standards. However, taking the class as the unit of analysis we would expect to find a correlation between students' relative academic standing within the class and the grades awarded to students by the teacher of the same class. An early study of this kind was attempted by Krueger in 1939 and subsequent within-class studies have found strong associations between standardized measures of academic attainment and grades (Fisher, 1995).

Following this logic, it may be expected that within-class metrics could be more useful for exploring some socio-pedagogic issues than using the individual or school as the unit of analysis. 'Situated Attainment' (SA) is such a class-based metric.

Situated Attainment is the difference between grade rank and IQ rank within the class. It can have many possible uses. A positive SA indicates the student's grade was higher than would be predicted by their relative IQ. Negative SAs indicate under grading or under performance. Using SA we can separately identify under performance and underachievement. These words are defined here as: Under performance results in a standard below some group norm comparison (e.g. below average), and underachievement results in a standard below that predicted by the student's academic ability. Where a grade is given for a short term assignment, a negative SA can be used as feedback to show that the student can be expected to produce better work. If a grade represents a combined mark over some longer period of time, such as an end of year grade, the student's consistently lower than expected achievement is likely to have become evident to his or her peers. Such negative SA may then indicate serious underachievement which may be associated with peer related social, personal or behavioural problems (Goergi, 1972).

Operational definition of Situational Attainment

Situated attainment (SA) is the difference between how a student is ranked in-class by IQ and by assessment Grade (the grade awarded for work done, e.g. as a percentage, not year Grade as in k-12). SA=RG-RIQ where SA is Situated Attainment, RG is in-class Ranking by Grade, and RIQ is in-class ranking by Intelligence Quotient

For ease of interpretation, reverse rankings are used, the smallest number being given the rank of 1, so that the higher the IQ or Grade then higher is the student's rank. Table 1 illustrates calculations of the metric for an artificial data set for a class of 10 students.

Table 1. Data illustrating the calculation of Situated Attainment

Student	Grade%	IQ	RG	-	RIQ	=	SA	
1	40	116	3	-	7	=	-4	Undergraded
2	20	104	1	-	4	=	-3	Undergraded
3	65	108	7	-	5	=	2	Overgraded
4	62	91	4	-	3	=	1	Overgraded
5	83	84	10	-	1	=	9	Overgraded
6	63	125	6	-	10	=	-4	Undergraded
7	68	117	8	-	8	=	0	As Expected
8	30	124	2	-	9	=	-7	Undergraded
9	62	84	4	-	1	=	3	Overgraded
10	69	115	9	-	6	=	3	Overgraded

Key
IQ Intelligence Quotient
RQ Rank by Grade
RIQ Rank by IQ
SA Situated Attainment

Although Table 1 illustrates an artificial example, we can see that positive values of SA indicate that the student has been over graded in relation to the prediction expected from their IQ. Similarly, negative values indicate under grading. It is proposed that we can use the SA metric to more sensitively explore variables that may contribute to over and under grading within the classroom, such as age, gender and personality differences.

This study investigated assumptions and uses of Situated Attainment with a sample (n=319) of Jamaican adolescents.

Method

Nine Jamaican urban secondary schools were chosen at random for this study. Permissions were obtained for one 9th grade intact class in each of these schools to take part in the study and for the half-year grade percentages of these students to be used in the study. The subjects were 319 Jamaican adolescents, 127 boys and 192 girls, with a median age of 14 years 3 months. The number of students in each class ranged from 30 to 40 with a median of 36. It was considered that students' scores in Mathematics and English would best represent their academic performance across school subjects. Hence, the average of each student's percentage half-year grades in Mathematics and English was used as the Grade measure.

The subjects completed a sub-set of verbal, spatial and logical IQ items chosen from the standardized General Ability Tests 2 (GAT-2) as being culturally appropriate and of fitting difficulty levels for the age of the sample. In addition, subjects were also given instructions to rate, from 0-9, the four self-esteem questions shown in Figure 1.

Figure 1. Instructions and self-esteem questions.

> The following statements are about you. Rate each putting the best number from 0 to 9 in the box to show how much you agree that it is true of you.
>
> *0 means 'not true of me'*   *1-3 means 'only a little true of me'*   *4-5 means 'mostly true of me'*
>   *6-8 means 'very much true of me'*   *9 means 'totally true of me'*
>
> Q1 ☐ Today I am very happy
>
> Q2 ☐ I feel I'm not achieving as much as my class mates in my schoolwork.
>
> Q3 ☐ I often wish I look like someone else.
>
>
> The following question is a NOT 0-9 rating. Read the question carefully and answer accurately.
>
> Q4 How many times **last week** did any of your friends avoid you?_____

Analyses and results

The subjects' IQ scores, together with their half-term grade averages and responses to the self-esteem questions were coded for analysis. In addition, all scores were recorded as in-class ranks with the lowest scores being awarded the rank of 1. The Situated Attainment for each student was calculated by subjecting the student's within-class IQ rank from his or her within-class Grade rank.

The normality of the SA metric is illustrated in Figure 2 and shown by the distribution parameters in Table 2 and the following single sample fit statistic: Kolmogorov-Smirnov Z test showed that the SA distribution was close to normal Sig p=0.975 (2-tailed)

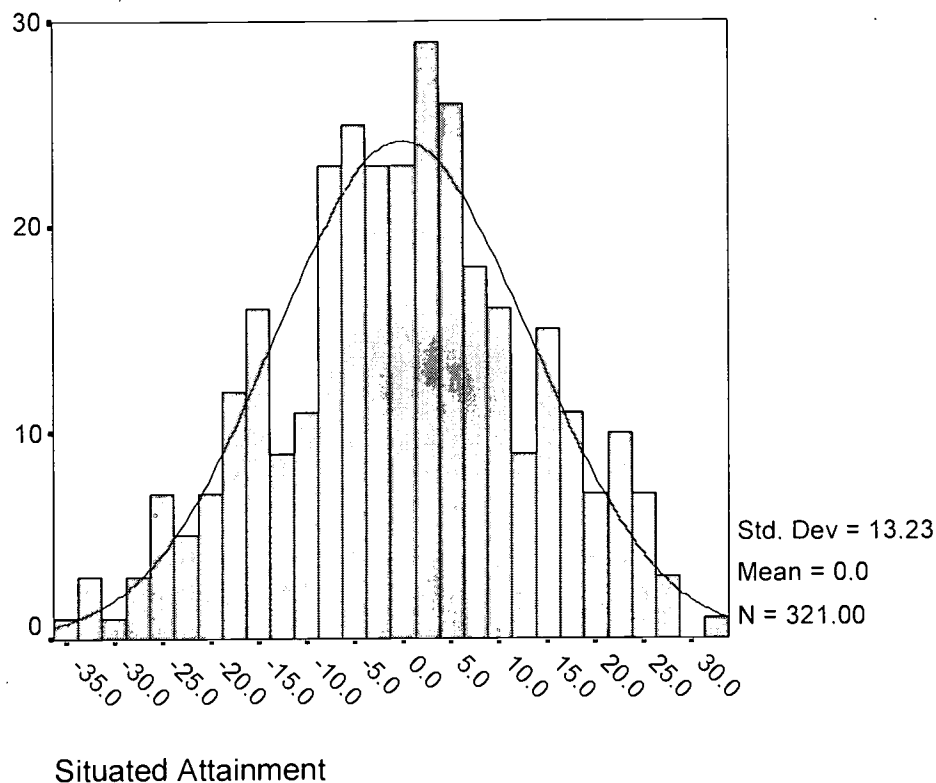Figure 2: Normal distribution of Situated Attainment

Situated Attainment

Table 2: Distribution parameters of Situated Attainment

SA Distribution Parameters	
N	321.000
Mean	0.000
Median	0.000
Mode	-4.500
Skewness	-0.081
Std. Error of Skewness	0.136
Kurtosis	-0.308
Std. Error of Kurtosis	0.271
Range	67.000
Minimum	-35.500
Maximum	31.500

Testing the assumptions of Situated Attainment

It was postulated that no significant association would be found between Grades and IQs using (a) the individual as the unit of analysis (IUA) or using (b) the school as the unit of analysis (SUA). It was postulated however, that a statistically significant association would be found between Grades and IQs when (c) the class was used as the unit of analysis (CUA).

Assumption (a), that no association would be found using the IUA, was tested using the correlation of IQ with Grade for the whole sample. The correlation of IQ with Grade was not significant at $r=0.077$ ($p=0.169$, $n=321$) as postulated.

Assumption (b), that no association would be found using the SUA, was tested by comparing the mean grades of the schools with the highest and lowest mean IQ scores. First, an ANOVA was used to show that the schools differed significantly in their mean IQ scores. Table 3 shows this ANOVA and Figure 3 shows a plot of the mean IQs of each school.

Table 3 ANOVA showing significantly different mean IQs between the 9 sample schools

IQ

IQ	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	739.006	8	92.376	31.016	.000
Within Groups	929.243	312	2.978		
Total	1668.249	320			

Figure 3: Mean IQ scores of subjects in each school
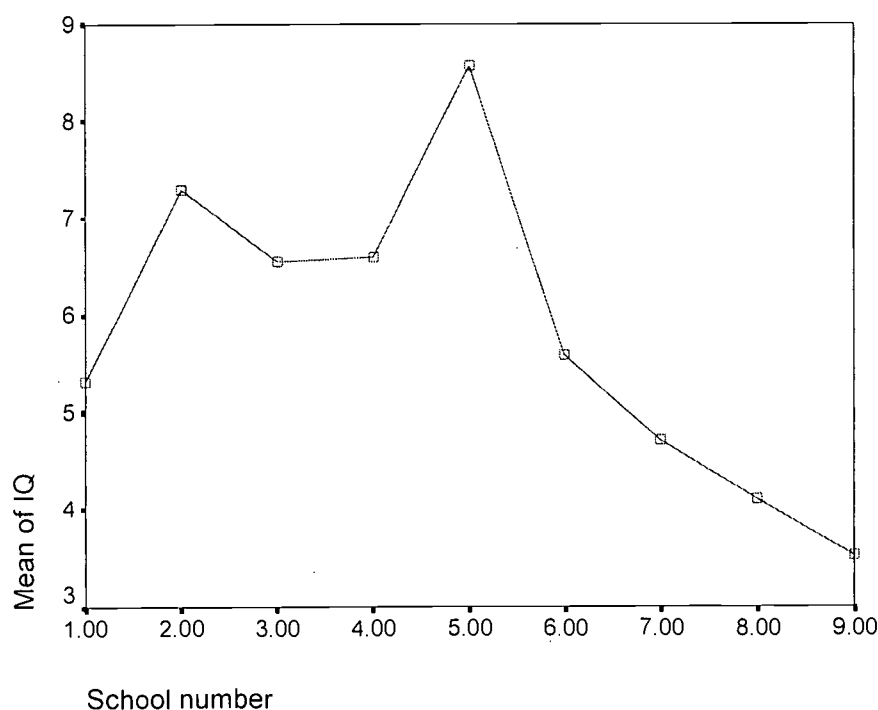
The four schools with the highest mean IQs were grouped (5, 2, 4, 3) into a 'High IQ' group and the four schools with the lowest mean IQs were grouped (1, 7, 8, 9) into a 'Low IQ' group. A t-test showed that the difference between mean IQs of the two school groups was very large, Table 4. However, Table 5 shows that the mean percentage grades of the two school groups was very close with no significant difference as postulated.

Table 4: Schools' analysis: Large significant differences between mean IQs of two school groups

```
                     Number
Variable             of Cases  Mean       SD     SE of Mean
IQ
Low IQ        147        4.4762      1.881     .155
High IQ       142        7.2958      1.953     .164
              Mean Difference = -2.8196
Levene's Test for Equality of Variances: F= .014    P= .905

                 t-test for Equality of Means              95%
Variances t-value df        2-Tail Sig          SE of Diff     CI for Diff
Equal     -12.50  287        .000       .226    (-3.264, -2.376)
Unequal   -12.49  285.52     .000       .226    (-3.264, -2.375)
```

Table 5: Schools analysis: No significant difference between the mean grade percentages of high and low IQ schools

```
               Number
Variable       of Cases  Mean       SD     SE of Mean
GRADE
Low IQ         147       62.9434    10.113    .834
High IQ        142       63.9544    10.870    .912
               Mean Difference = -1.0110
Levene's Test for Equality of Variances:  F= 1.022    P= .313

               t-test for Equality of Means              95%
Variances t-value  df        2-Tail Sig        SE of Diff    CI for Diff
Equal     -.82 287      .413       1.234      (-3.441, 1.419)
Unequal   -.82 283.77   .414       1.236      (-3.444, 1.422)
```

These results supported assumption (b) that no association between Grades and IQ would be found using the SUA.

Assumption (c), that an association would be shown between Grades and IQ using the CUA, was tested by correlating students' in-class IQ ranks (RIQ) with the in-class ranks of their grades (RG). The correlation of RIQ with RG was statistically significant at r=0.201** (p<0.0005, n=321), which supported the assumption.

Uses of Situated Attainment

Gender bias

We might be interested to know if there are gender differences in how teachers award grades in relation to IQ. Are males, or females systemically under graded or over graded relative to their academic ability? A t-test showed that there was no significant differences between how the groups were graded and the means of both groups was very near to zero (-0.0940 for males and 0.0703 for females) showing that, overall, grading was equal and unbiased for both sexes.

Age bias

We might be interested to know if teachers are influenced by the age spread in their classes when they are grading. The age spread in the whole sample is greater than the age spread in any one class so, as expected, IUA showed IQ increased significantly with Age (r=0.155*., p=0.008, n=290). However, perhaps unexpectedly, IUA also showed that grade levels significantly reduced with Age (r=-0.280**, p<0.0005, n=290), that is, there is a tendency for teachers in the whole sample to award lower grade marks to older students. So do teachers have expectations of older students that are too high? Using the CUA we find that the correlation between rank Age (RA) and RG is significant at r=-0.140* (p=0.17, n=290), indicating that older students are receiving lower grades in-class to a lesser extent than the IUA revealed. However, the correlation between RA and SA was significant at r=-0.143* (p=0.015, n=290). This shows that teachers are grading older students in their classes below the level warranted by their ability. Further more, this under grading accounts for $(0.140/0143)^2 = 95.8\%$ of the under performance of older students.

Social concomitants of under performance and under achievement

Q1 ☐ Today I am very happy

Does a student's serious or flippant attitude affect the grades a teacher awards? Using the Individual as the Unit of Analysis (IUA) there was no significant coloration found between self-reported happiness and Grades (r=-0.035, p=0.552, n=295). However, using the CUA we found happy students had a significantly lower SA, with a significant correlation between ranked scores on question 1 (RQ1) and SA of r=-0.146 (p=0.012, n=295). This means that unhappy students had higher SAs indicating that they were over graded. Why is this? 'be teachers assumed happy students were more flippant, students who should have tried harder. Maybe

teachers interpreted unhappiness as a 'serious' attitude to the work, or maybe teachers wanted to 'cheer up' sad students by over-rewarding them for the work they did.

Q2 ☐ I feel I'm not achieving as much as my class mates in my schoolwork.

The Individual Unit of Analysis (IUA) showed students who get low grades tended to be very dissatisfied with their performance. The correlation between Q2 and Grade was highly significant at -0.255** (p<0.0005, n=320). As expected, this effect was stronger within the class, because the question is relative to "class mates'. This was shown by the correlation of ranked answers to Q2 (RQ2) with RG of r= -0.301** (p<0.0005, n=320). However, the significant correlation of RQ2 with SA of r= -0.243** (p<0.0005,n=320) indicated that most of these students $[(.243/.301)^2 = 65.2\%]$ were disappointed in their low grades, not because they had a low potential, but because they had been under graded.

Q3 ☐ I often wish I look like someone else.

Q4 ☐ How many times **last week** did any of your friends avoid you?

There were significant CUA correlations between the in-class ratings of the responses to these questions , RQ3 and RQ4, respectively, with SA. The correlation of RQ3 with SA was r=-0.157** (p=0.005, n=318) and the correlation of RQ4 with SA was r= -0.174** (p=0.002, n309).

The grades used in this study were half-year grades, so that this under grading represented an on-going situation of underachievement for these students. These correlations indicate that this long-term under achievement was accompanied by low self-esteem responses of wishing to look like someone else and by experiences of being avoided by ones friends.

Summary

This study postulated that within-class metrics were more sensitive measures of teacher and student value issues than analyses across schools or comparisons of individuals across varied samples. The reason proposed for this is that teacher and student evaluations are very likely to be normed against their class experiences because of the disproportionate time and involvement teachers and students spend with their class environment. This reason was supported by reviewing studies showing teachers' values influenced grades more than standardized scores. The assumption was empirically supported by showing the lack of association between in-class grades and a standardized measure of intelligence when using the individual and the school a the unit of analyses, compared to significant associations found when analysing IQs and grades ranked within each class.

'Situational attainment' (SA) as a within-class metric, was suggested by a review of literature showing that situational influences, including teachers' values, can enhance or degrade a student's performance as predicted by standardised scores. SA is the difference in a students within-class Grade rank and their IQ ranking. A positive SA indicates over grading or over achievement whereas a negative SA indicates under grading or underachievement. Thus 'underachievement' is achieving less that one's potential and is different from under performance, which is a norm group comparison, such as being below average.

SA analyses on the Jamaican sample showed that teachers were not gender biased in their grading, nor did they over or under grade mails or females. Teachers were, however, highly biased in their grading against older students. SA analysis showed that older students tended to under perform and 95.8% of this under performance was due to Jamaican teachers' higher expectation of older students over and above their ability.

SA analyses also showed that teachers undergrade happy students, perhaps mistaking their happiness for flippancy or interpreting a 'serious' attitude as more fitting academic - or teachers may want to compensate for students unhappiness by over grading their work.

SA analysis showed that 65.2 % of students reporting lower grades than their peers were being under graded relative to their potential as indicated by their IQ.

SA analysis also demonstrated the negative effect long-term underachievement has on students' self-esteem.

It should be noted that standardized within-class metrics would probably yield results with greater affect

sizes that ranked metrics, because of the greater variance accounted for by standardized measurers. However, SA was defined as a ranked metric to make it more usable to teachers, as teachers can more readily rank their students than norm their scores.

It would appear from the promising results in this study that the SA, and other within-class metrics, may offer more discriminating analyses of the wide value data, such as grades and attitude surveys, obtained from teachers and their students.

References

Babad, E. Y. (1993). Pygmalion: Twenty five years after interpersonal expectations in the classroom. In P. D. Blanck (Ed.), *Interpersonal expectations: Theory, research, and applications* (pp. 125-153). Paris: Cambridge University Press.

Baron, R. M., Tom, D. Y. H. & Cooper, H. M. (1985). Social class, race, and teacher expectations. In J. B. Dusek (Ed.), *Teacher expectancies* (pp. 251-270). Hillsdale, NJ: Erlbaum.

Bennett, R., Gottesman, R., Rock, D., & Cerullo, F. (1993). Influence of behavior perceptions and gender on teachers' judgments of students' academic skill. *Journal of Educational Psychology, 85*, 347-356.

Boulon-Diaz, F. (1992, August). *The Effects of Intelligence, Social Class, Early Development and Pre-School Experience on School Achievement of Puerto Rican Children.* Paper presented at the Annual Convention of the American Psychological Association, Washington, DC.

Bridgeman, B., Mccamley-Jenkins, L., & Ervin, N. (2000). *Predictions of Freshman Grade-Point Average from the Revised and Recentered SAT I: Reasoning Test* (College Board Research Report No.2000 - 1/ETS Research Report 00 - 1). New York, NY: ETS.

Brookhart, S. M. (1991). Grading practices and validity. *Educational Measurement: Issues and Practice, 10*, 35-36.

Brophy, J. (1983). Research on the self-fulfilling prophecy and teacher expectations. *Journal of Educational Psychology, 75*, 631-636.

Carvajal, H., & Pauls, K. K. (1995). Relationships among Graduate Record Examination scores, Wechsler Adult Intelligence Scale-Revised IQs, and undergraduate grade point average. *College Student Journal, 29*(4), 414-416.

Clifford, M. M. (1975). Physical attractiveness and academic performance. *Child Study Journal 5*, 201-209.

Cuppens, I. W. (1967). Intelligence, motivation and anxiety as determinants of school achievement in the first class of secondary education: an investigation probing the concept of underachievement. *Anthropology & Medicine. 16*(1), 1-36.

Doherty, J., & Conolly, M. (1985). How accurately can primary school teachers predict the scores of their pupils in standardized tests of attainment? A study of some non-cognitive factors that influence specific judgment. *Educational Studies, 11*, 41-60.

Dusek, J. B., & Joseph, G. (1983). The bases of teacher expectancies: A meta-analysis. *Journal of Educational Psychology, 75*, 327-346.

Feldhusen, J., Thurston, J., & Benning, J. (1970). Longitudinal analyses of classroom behavior and school achievement. *Journal of Experimental Education, 38*, 4-10.

Fisher, J. L. (1995). Relationship of Intelligence Quotients to Academic Achievement in the Elementary Grades. ERIC document ERIC Accession No. — ED388428.

Frary, R.B., Cross, L.H., & Weber, L.J. (1993). Testing and grading practices and opinions of secondary teachers of academic subjects: Implications for instruction in measurement. *Educational Measurement: Issues and Practice 12*(3), 23-30.

Goergi, N. J. (1972). The relationship of self-concept in high school Negro students in Muncie, Indiana to intelligence, achievement, and grade point average. (Doctoral dissertation, Ball State University, 1972). *Dissertation Abstracts International, 32*(8-A), 4418.

Hall, V. C., Howe, A., Merkel, S., & Lederman, N. (1986). Behavior, motivation, and achievement in desegregated junior high school science classes. *Journal of Educational Psychology, 7*, 108-115.

Hartley, D. (1982). Ethnicity or sex: Teacher definitions of ability and reading comprehension in an E. P. A. primary school. *Research in Education, 28*, 9-24.

Holbrook, J. W. (1982). Pupil temperament characteristics, the teacher's appraisal of their intelligence, and assignment of grades. (Doctoral dissertation, University of Georgia, 1982). *Dissertation Abstracts International,* 43(6-A), 1891

Jussim, L. (1986). Self-fulfilling prophecies: A theoretical and integrative review. *Psychological Review, 93*, 429-445.

Jussim, L. (1989). Teacher expectations: Self-fulfilling prophecies, perceptual biases, and accuracy. Journal of Personality and Social Psychology, 57, 469-490.

Konarzewski, K. (1993). Under what conditions students' intelligence and grades correlate? *Kwartalnik Pedagogiczny, 1,* 111-126.

Krueger, R. L. (1939). Grades and intelligence quotients: A study of the figures for three years in one private school. *School & Society. 50*, 60-64.

Lassiter, K. S. (1995). The Relationship between Young Children's Academic Achievement and Measures of Intelligence. *Psychology in the Schools, 32*(3), 170-77

Malecki, C. (1998). The influence of elementary students' social behaviors on academic achievement. Doctoral Dissertation. University of Wisconsin-Madison.

McCombs, R.C. & Gay, J. (1988). Effects of race, class, and IQ information on judgments of parochial grade school teachers. *Journal-of-Social-Psychology, 128*(5), 647-652

Pedulla, J. J. , Airasian, P. W. & Madaus, G. F. (1980). Do teacher ratings and standardized test results yield the same information? *American Educational Research Journal, 17*, 303-307.

Plake, B. S., & Impara, J. C. (1993). Assessment competencies of teachers: A national survey. *Educational Measurement: Issues and Practice, 12*, 10-25.

Poteat, G. M., Wuensch, K. L. & Gregg, N. B. (1988). An investigation of differential prediction with the WISC—R. *Journal of School Psychology, 26*(1), 59-68.

Rodriguez, V. L., Prewitt D., & Joseph O. (1990). Correlations among GPA and scores on the Spanish version of WISC—R and the Woodcock-Johnson Achievement subtests for 10- to 12-year-old Puerto Rican children. *Psychological Reports, 66*(2), 563-566).

Rosenthal, R., & Jacobson, L. (1968). *Pygmalion in the classroom: Teacher expectations and pupils' intellectual development*. New York: Holt, Rinehart & Wilson.

Ross, M. B. & Salvia, J. (1975). Attractiveness as a biasing factor in teacher judgments. *American Journal of Mental Deficiency, 80*(1), 96-98.

Ross, S. I. & Jackson, J. M. (1991). Teachers' expectations for Black males' and Black females' academic achievement. *Personality and Social Psychology Bulletin, 17*, 78-82.

Schaefer, B. & McDermott P. (1999). Learning behavior and intelligence as explanations for children's scholastic achievement. *Journal of School Psychology, 37*, 299-311.

Sparacino, J., & Hansell, J. (1979). Physical attractiveness and academic performance: Beauty is not always talent. *Journal of Personality, 49*(3), 449-469.

Sternberg, R. J. (1996). What Should We Ask About Intelligence *The American Scholar, 65*(2), 205-217

Weinstein, R. S. (1993). Children's knowledge of differential treatment in school: Implications for motivation. In T. M. Tomlinson (Ed.), *Motivating students to learn: Overcoming barriers to high achievement* (pp. 197-224). Berkeley, CA: McCutchan Publishing.)

Wentzel, K. (1993). Does being good make the grade? Social behavior and academic competence in middle school. *Journal of Educational Psychology, 85*, 357-364.

Yarborough, B. H. & Johnson, R. A. (1980). A six-year study of sex differences in intellectual functioning, reading/language arts, achievement and affective development. *Journal of Psychology, 106*, 55-61.

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