

College Grades and Occupational Performance:
Employer Perceptions

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Paper prepared for the American Educational Research
Association Annual Meeting, April 20, 1987 in Washington, D.C.

Employers often assume a positive relationship between college achievement (grades) and successful job performance. This relationship has been supported by several studies undertaken at AT&T (Bridgman, 1930; Waters and Bray, 1965) and another at Hughes Aircraft Company (Martin and Pacheres, 1962) where significant relationships were reported between grades and selected measures of job success. Jencks and Riesman (1968) have further argued that the grades-job success association may have been influenced by the employers' belief that professional schools have conveyed the specialized knowledge necessary to participate successfully in the work environment. Thus, those students with higher grades, having demonstrated a mastery of the subject matter, are expected to perform better within the organization.

Several reviews of the literature on academic achievement and occupational performance (Hoyt, 1965; Stice, 1979; Samson, Grave, et.al., 1984) have shown that the relationship between grades and occupational success, however defined, was very weak. According to Samson and his colleagues, only 2.4% of the variance in occupational performance could be explained by academic achievement. Ability to predict success through grades was somewhat higher for business and nursing and somewhat lower in teaching and engineering than the general findings in the above studies (Samson, et. al., 1984). A common conclusion in all these studies has been that grades were not helpful in predicting occupational performance.

personality based performance criteria such as leadership. Further, it was hypothesized that the ratings for technically oriented employers would differ from service or non-technical employers.

Employers and Grades

Data on recruiting practices for 1987 were obtained through a survey of corporate members of the College Placement Council, recruiters who have visited Michigan State University over the past several years, and a random sample of small employers drawn from Dunn and Bradstreet. A total of 4,240 employers were contacted with 760 (18%) returning the questionnaire. Six hundred ninety-four (694) contained usable responses for these purposes. Responding organizations were grouped according to economic sector: manufacturing (229), banking and finance (118), service (196), education (120), and government (31).

The survey contained questions dealing with hiring and salary expectations for 1987, recruiting procedures and practices, and issues in employing new college graduates. Three questions dealt specifically with grades and job success. The first item asked employers to rate whether grades were predictive of job success on a Likert scale from never (1) to always (5). In the second item, the relationship of GPA to selected job related skills was measured using the same scale. In the final question a list of employment factors, including grade point average, was presented, asking that each factor be rated on the never to always scale, as to its importance in making the hiring selection.

likely rated on their grades, as a measure of their knowledge of the subject matter. This situation closely parallels the professional school mentality that concerned Jencks and Reisman, (1968).

The lack of a relationship between grades and success for engineering and medicine is not unexpected upon consideration of the GPA requirements these students often face in seeking admission to these majors. Admittance to engineering, for example, is often heavily based on cumulative grade point, as well as the calculated grade point from selected courses in mathematics, natural sciences, and engineering. The average GPA for engineers is generally one of the highest among all majors on a campus (at MSU the GPA for engineering graduates the past seven years was 3.04 as compared to the campus-wide average of 2.95). Because of the range restrictions built into the engineering major, grades tend to cancel out in evaluating potential engineers, leaving other measures (e.g. prior work or intern experiences) as possible better indicators for future job success.

Grades and the Elements of Success

Studies investigating the relationship between grades and selected performance characteristics have found little correlation between GPA and these characteristics. Pallett (1965) examined eight characteristics acknowledged to be indicators of success in business: drive, creativity, persuasiveness, leadership, problem-solving ability, oral communication, identification with

knowledge acquired in school. Academic achievers may also retain information longer than students with lower grades.

Grades are closely predicted by natural ability and motivation. Thus, the appearance of hard work near the top of the list was not unexpected. What's interesting was the lower rating for productivity, a characteristic often linked to hard work.

Characteristics least likely to be associated with grades could be grouped as social, communication, leadership, and evaluation traits. These low associations may confirm Pallett's findings (1965) that grades are not likely to be related to success characteristics desired by employers. However, there exist no psychological or theoretical bases why GPA should relate to these factors. Pallett's study may prove misleading, as will be discussed below.

Recent critics of American business have lamented that creativity is missing, as well as effective leaders who are willing to take risks. For an employer seeking employees that are creative, risk-takers who can effectively evaluate and communicate ideas, grade point average may not be even related to these qualities. Obviously, a broader set of characteristics is used in the evaluation of potential employees.

Significant differences in the rating occurred for selected characteristics, particularly the social, interaction skills (identified a TYPE in Table 1). The only significant comparison that did not involve educational employers involves productivity. Manufacturers rated this characteristic at 3.17 which was different from the service employers whose rating was 3.42. The ratings for

major groups: Education (12), Personality (11), Health (13), Job Skills (18), and Personal (16).

Factor analysis was employed for each major category in order to represent the set of variables in terms of the smallest number of hypothetical (latent) variables. In the exploratory context of factor analysis, the commonality of the variables was observed through inspection of the co-variance of the data set. The Scree test (Cattell, 1966) was used to determine the number of hypothetical factors and oblique rotation was performed to reach a terminal solution. The data variables were reduced through this process to 14 hypothetical factors. These 14 factors actually can be scaled and weighted for use in the further examination of employment cues.

The 14 new factors with the underlying variables are listed in Table 2. To obtain these factors several general rules were invoked. Variables that loaded equally across factors (related to more than one dimension) have not been included in the index construction because of ambiguous interpretation. Transcript check in the educational category was the only variable omitted for this reason. Three leadership variables, sets an example, leadership experience, and innovative ideas, had high correlations on all three job skill factors with the highest loadings on the management factor. Leadership skills have been indexed with management skills for the purpose of analysis, but it is clearly evident that leadership qualities have an important influence in other job skills, especially communication abilities.

importance of grades to job success and participation in pre-screening would be hypothesized. The questionnaire did contain a question on pre-screening. Approximately 66% of the respondents (623 answered the question) indicated they pre-screened. Manufacturers did so more than others with 76% pre-screening. Seventy (70) percent of banking/financial institutions, 69% of service employers, 67% of government agencies, and only 41% of the educators pre-selected candidates. The correlation between importance of grades and pre-selecting was very small, .065, and not statistically significant.

This does not dismiss the contention that grades are being used to select potential employers. It does suggest that several characteristics are being evaluated simultaneously during the pre-selection process. Grades may certainly establish the final list of candidates, but GPA is not the sole criteria.

Employers who request closed schedules, where candidates are invited to interview by the employer, are much more likely to view grades as an indicator of success. The correlation between the two variables was 0.383 which was moderately strong and statistically significant ($p < .001$). As a focal point of concern, closed schedules may present a more serious problem than pre-selection, as the placement officials can lose control over student access to these employers.

Implications and Future Research

What stands out from the findings on the relationship between grades and job success are not the differences, but rather the

Recruiters who heavily rely on grade may convey a message, at least to some students, that the bottom line to getting a job is grades. Students may perceive this message and place a high priority on grades. Students may adjust their behavior to accommodate the need to maintain a high a grade point average. For example, students can take fewer credit hours per term, avoid difficult courses, select easy electives, and curtail extra-curricular activities. It is difficult to account for these behavioral characteristics and to isolate a direct causal link between overall grade point average and job success. With the difficulty in getting a handle on what factors comprise GPA, a better relationship may be found between specific course content as related to similar job specific ratings of performance, with course grades serving as the measure of ability.

A major concern that emerged in preparing this report was the lack of theoretical/psychological rationale for linking grades to job performance. Using Pallett's study (1965) as an example, factors such as persuasiveness are not necessarily intelligence based; so, why should GPA relate to it? The whole body of research on this issue is suspect, simply because the grade-performance relationship is being forced or may not even exist. As a result, GPA is being dismissed as a employment selection criterion or is held up as the one universal predictor. Renewed research on this topic may be timely and warranted.

The dilemma is how to de-emphasize the use of GPA when it is not entirely an appropriate measure of performance. Simply dropping GPA as an indicator may not be helpful because other

istics in the employment decision may be warranted. Recruiters may perceive grades similar to employers but in the evaluation of candidates grades may remain a dominant factor. Posner (1981) revealed some differences between recruiters and students over ratings of job characteristics. This suggests that recruiters' conceptual world may differ from real world actions.

These research projects will provide additional information on the role of grades in the hiring process. Until additional information on other possible evaluation measures can be collected, recruiters should be encouraged to consider additional factors, such as difficulty of elective courses, extra-curricular activities, and communication skills, in their evaluation. At the same time, faculty and staff at the college or university need to convey to employers information on aspects of the institution and demands placed on students that may go unobserved by the employer.

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Table 2. Means of Major Factors Resulting from Terminal Factor Solution (Oblique Rotation) With Underlying Variables.

Factor	n	Mean	STD	Underlying Variables
Mature	709	4.41	0.58	Dependability, maturity, flexibility
Approach	686	4.32	0.55	Acceptance of responsibility, ability to get things done, decision making abilities, common sense
Self	705	4.21	0.64	Neatness, self-esteem, self confidence, tactfulness
Communication	691	4.17	0.62	Speaking abilities, writing skills, communication abilities (general), interpersonal skills, motivational skills
Drive	700	4.11	0.66	Commitment to the organization, perseverance, ambition
Education	688	4.02	0.66	Academic major, degree level, years of education
Wellbeing	666	3.81	0.82	Mental stability, physical fitness, physical ability to perform tasks, health status
Management	670	3.36	0.62	Ability to delegate, budget abilities, team management skills, strategic planning, competitive abilities, leadership experiences, innovative ideas, example to others
Grades	661	3.34	0.70	Overall GPA, major GPA, minor GPA
External	688	2.91	0.68	Knowledge of organization, membership in organizations, Willing to relocate, suitable appearance, interest in current events
Work	675	2.91	0.79	Internship, co-operative ed., part-time employment
Medical History	672	2.55	1.12	Medical history, physical exam, smoking history, doctor interview
Health Tests	648	2.11	1.37	Urine analysis, drug screening, blood test
Internal	672	1.61	0.65	Marital status, compatible spouse, interest in family, attractiveness, youthfulness

