Correlates of College Grades

THE CURRENT CONVERSATION focuses on the comparative nature of college grading practices as displayed over time. Participants in the conversation approach issues concerning college grading from a longitudinal standpoint through the comparison of present grades with past grades. For example, critics of grade inflation are worried that the grading practices used in higher education are not as desirable as they used to be. To accurately determine what accounts for the changes, if any, from the past to the present, it is necessary to identify the factors that can influence college grades. It is necessary to review the correlates of college grades from a cross-sectional perspective, which can shed light on the phenomenon of changes in grade over time, because the change of the correlates of college grades may inevitably affect student grades. Cross-sectional analysis provides baseline information for discussions on issues related to college grading problems from a longitudinal perspective.

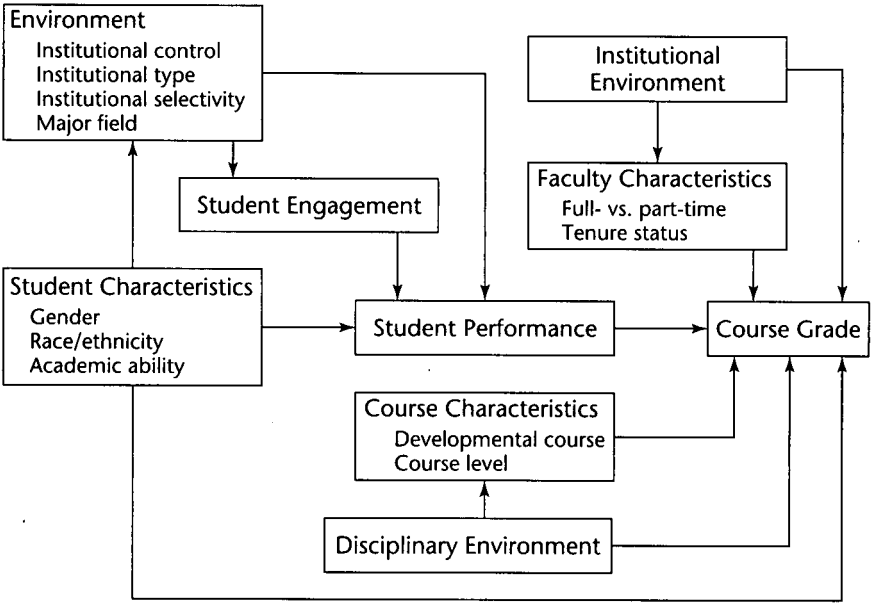
College grading is an exceptionally complex phenomenon because it is subject to both external social forces and internal changes of the participants (for example, students and faculty), policies and practices (for example, grading policies), and other factors (Birnbaum, 1977). Thus, a variety of factors can affect student grades in college. Without a clear understanding of factors related to individual grades and a thorough discussion about the changing nature of those factors over time, one is unlikely to decipher the facts from the myths in the college grading controversy (Chen and Cheng, 1999).

To understand college grading, researchers and scholars adopted different disciplinary perspectives to study and interpret college grades (Kuh and Hu, 1999;

Walvoord and Anderson, 1998). Economists view grades as a reward for academic performance, which is assumed to be related to individual academic ability as well as the quantity and quality of effort the student puts forth in educational activities (Becker, 1965; Hanushek, 1979). As a type of reward for academic performance, college grades serve as incentives for students in allocating their time and effort. Measures of students' ability and investment of their time and effort in the educational process are considered in econometric analysis of college grades. Sociologists typically assume that background characteristics have a nontrivial direct effect on academic achievement. Therefore, it is accepted that student backgrounds such as gender, race, and ethnicity and socioeconomic status need to be considered in understanding academic performance and college grades (Coleman, Hoffer, and Kilgore, 1982; Farkas and Hotchkiss, 1989; Van-Laar, Sidanius, Rabinowitz, and Sinclair, 1999). Psychologists suggest that motivation, self-efficacy, and other psychological variables all make differences in individual achievement and grades (Bandura, 1994; Marsh and Roche, 2000; McKeachie and others, 1990). Educational researchers frequently use a combination of disciplinary perspectives when examining problems such as grade inflation in higher education (Kuh and Hu, 1999; Shavelson and Huang, 2003; Wood, Ridley, and Summerville, 1999).

To identify the correlates of college grades, both the participants in the grading process and the environmental contexts contribute to the final product—college grades. Student grades in a given course are an indicator of student performance in the eyes of the faculty member. For this reason, students, faculty, contextual measures of the course, discipline, and the institution are major components in determining college grades and explaining the differences among college grades (Figure 2). Social contexts outside higher education can influence college grading, but outside social influences are largely beyond the control of a higher education institution. Inside the higher education system, the institution and academic discipline are two primary organizational formats that affect academic activities and grading practices (Clark, 1983). In a time of increasing concern about grade inflation, doubts arise concerning the validity of using grades as an indicator of student performance. Yet there remains no other direct measure of student performance. Further investigation into grading issues might benefit from the review of five

FIGURE 2
The Determinants of Student Course Grade



clusters of factors relating to student course grades: the student, the faculty, the course, the discipline, and the institution.

Students

Student characteristics have a substantial impact on college grades. Student ability, gender, and socioeconomic status (SES) are the basic correlates of college grades, as these three factors are consistently related to students' academic performance (Lavin, 1965). Specifically, student "ability is directly related to school performance; females have higher levels of academic achievement than males; and students of higher SES perform at higher levels than students of lower SES" (p. 43). Differences are likewise seen in gender. Studies have consistently shown that female students receive higher grades than their male counterparts (Adelman, 1999a; Goldman, 1985; Kuh and Hu, 1999; Volkwein and others, 2000). Student race/ethnicity is also related to college grades. Minority students are found to receive lower grades after controlling

for other related factors (Farkas and Hotchkiss, 1989; Van-Laar, Sidanius, Rabinowitz, and Sinclair, 1999).

Traditional predictors such as SAT/ACT scores, students' socioeconomic status, and high school grades are moderately associated with college grades (Robbins and others, 2004); however, SAT/ACT scores and high school grades are consistently the strongest predictors of student GPA in college, among all factors. Further, some psychosocial factors affect students' college grades. Academic self-efficacy appears to be the best predictor of GPA, with the second best predictor being achievement motivation. Other factors such as financial support, academic goals, academic-related skills, and social involvement are also found to have some impact on GPA. Student year in college (class level) likewise affects student grades. In general, lower-division students tend to receive weaker grades.

Regarding the relationship between student grades and student college behavior (that is, students' effort and engagement in college activities), research results provide somewhat conflicting information. Recent literature suggests a relationship exists between student effort and college grades, even though the magnitude of this relationship is debatable (Kuh and Hu, 1999; Rau and Durand, 2000; Schuman, 2001). Frisbee (1984) examined a random sample of 222 students at Cornell University and found that the time students allocated to a course was significantly and positively associated with the grade earned. Schuman, Walsh, Olson, and Etheridge (1985) reported that a positive correlation existed between hours of study and grades but that it was generally very small and largely limited to students who spent above-average amounts of time studying. Volkwein and others (2000) reported that student effort is a strong predictor of student GPA. They also found that favorable classroom experiences contributed to higher GPA.

Faculty

Faculty members have the primary responsibility in assessing student academic performance and assigning grades to students. Faculty backgrounds appear to matter somewhat in assigning grades to students. Adjunct faculty members tend to distribute higher grades than regular faculty (Chen and Cheng, 1999;

Sonner, 2000). Adjunct professors, hired on a term-by-term basis, are more likely to be pressured to attain positive student evaluations and thus distribute higher grades. The credentials of the instructor do not appear to make substantial differences in student grades, however. Faculty rank has marginal impact on grading practice (Chen and Cheng, 1999), but faculty tenure status influences grading practices. Untenured faculty members are more likely to assign higher grades to students than tenured faculty members who teach similar courses (Moore and Trahan, 1998).

Courses

Courses impact college grades in several ways. Different levels of courses create differences in student grades. The higher the course level, the higher the grades (Chen and Cheng, 1999; Sonner, 2000); the smaller the class, the higher the grades (Sonner, 2000). Developmental courses may be awarded higher grades. Additionally, students' independent work in the junior or senior years tends to receive higher grades than regular courses.

Discipline

Academic disciplines and major fields can have substantial differences in grading practices. Grades for courses in the humanities and social sciences generally are higher than grades in other fields (Johnson, 2003; Kuh and Hu, 1999). Fields related to science and mathematics tend to have rigorous grading practices (Willingham, Lewis, Morgan, and Ramist, 1990). Willingham, Lewis, Morgan, and Ramist's study revealed that biology, physical science, engineering, and calculus had the strictest grading policies, whereas physical education, studio art, music, theater, and education maintained lenient grading systems.

Institution

Institutional characteristics influence grading practices. Grades are not uniformly awarded across institutional types. Public institutions tend to award lower grades compared with their private counterparts. Students at different Carnegie-type institutions receive different grades. Students at doctoral universities tend to

receive the highest grades compared with students enrolled in other types of schools (Kuh and Hu, 1999). In addition, selective colleges maintain lower college GPAs when controlling for other factors (Volkwein and others, 2000).

Numerous factors can interact, making college grading a complex phenomenon. For example, male students at research universities report grades equal to those of females, while male students at all other types of institutions have significantly lower grades than their female counterparts. White students uniformly earn higher grades than students of color at all types of institutions. The increase in grades was greater for students in humanities than for science and mathematics majors from the mid-1980s to the mid-1990s. Female students earned higher grades in all the major field clusters, with the gender difference most pronounced in the preprofessional and humanities fields (Kuh and Hu, 1999).

The apparent lack of other direct measures on students' performance elicits an interesting problem. "There is no reliable way to determine the changing quality of undergraduate work that lies behind the grade. One would need, subject by subject, samples of student work responding to the same 'prompts,' judged by the same faculty members using the same criteria, over two or three decades in order to determine the changing relationship between grades and performance" (Adelman, 1999a, p. 198).

In reality, researchers usually use proxy measures of student performance in examining grading problems. GRE or other standardized test scores have been used as the underlying measures to explore the grade inflation problem (Wood, Ridley, and Summerville, 1999). Student academic ability and engagement in college are important determinants in academic performance (Pascarella and Terenzini, 1991). Researchers also use student academic ability as measured by the ACT or SAT along with student engagement measures to examine college grading problems (Kuh and Hu, 1999; McSpirit and Jones, 1999).

In sum, cross-sectional analyses reveal that college grades are influenced by a variety of factors: the characteristics of the student, faculty, course, institution, and the discipline. Undoubtedly, changes in the determinants of college grades could impact grades over time. This understanding forms a foundation for an improved conceptualization of grading problems in higher education.