

1996

Rank-in-class as a strong predictor of college success

Mark Joseph Podhajsky
University of Northern Iowa

Let us know how access to this document benefits you

Copyright ©1996 Mark Joseph Podhajsky

Follow this and additional works at: <https://scholarworks.uni.edu/grp>



Part of the [Education Commons](#)

Recommended Citation

Podhajsky, Mark Joseph, "Rank-in-class as a strong predictor of college success" (1996). *Graduate Research Papers*. 3141.

<https://scholarworks.uni.edu/grp/3141>

This Open Access Graduate Research Paper is brought to you for free and open access by the Student Work at UNI ScholarWorks. It has been accepted for inclusion in Graduate Research Papers by an authorized administrator of UNI ScholarWorks. For more information, please contact scholarworks@uni.edu.

Offensive Materials Statement: Materials located in UNI ScholarWorks come from a broad range of sources and time periods. Some of these materials may contain offensive stereotypes, ideas, visuals, or language.

Rank-in-class as a strong predictor of college success

Abstract

Every year thousands of young Americans apply for admission to four-year colleges and universities. Colleges and universities set goals for the number and quality of students they wish to admit and enroll. The admission or denial of admission is partially determined by the prospective college student's high school performance. A variety of methods are used to evaluate prospective students for admission. Grade point average (GPA), rank-in-class (RIC), standardized test scores (SAT and ACT), essays, institutional entrance tests, and personal interviews are used in various combinations by the more than 3,000 institutions of higher education across the country. RIC is becoming one of the more popular criterion used by institutions of higher education for admissions decisions. According to Miller, Riven, and Walker (1991), the number of colleges and universities using GPA and RIC as admission criteria increased from 33% in 1979 to as many as 70% by 1989. This paper will examine the use of RIC in the admissions process, review the changes occurring in education that have an effect on RIC, and discuss the effectiveness of using RIC as a predictor for college success.

Rank-In-Class as a Strong Predictor of College Success

A Research Paper

Presented to

The Department of Educational Administration

and Counseling

University of Northern Iowa

In Partial Fulfillment

of the Requirements for the Degree

Master of Arts in Education

by

Mark Joseph Podhajsky

May 1996

Every year thousands of young Americans apply for admission to four-year colleges and universities. Colleges and universities set goals for the number and quality of students they wish to admit and enroll. The admission or denial of admission is partially determined by the prospective college student's high school performance. A variety of methods are used to evaluate prospective students for admission. Grade point average (GPA), rank-in-class (RIC), standardized test scores (SAT and ACT), essays, institutional entrance tests, and personal interviews are used in various combinations by the more than 3,000 institutions of higher education across the country. RIC is becoming one of the more popular criterion used by institutions of higher education for admissions decisions. According to Miller, Rivell, and Walker (1991), the number of colleges and universities using GPA and RIC as admission criteria increased from 33% in 1979 to as many as 70% by 1989. This paper will examine the use of RIC in the admissions process, review the changes occurring in education that have an effect on RIC, and discuss the effectiveness of using RIC as a predictor for college success.

Admissions Decisions

Each college is unique, with its own needs and goals. The goal of most institutions is to recruit and to retain students who will be successful at that particular institution. Success may be measured differently at each institution, from meeting the basic academic requirements to the inclusion of total student growth and development. Another purpose of the admissions process is that it serves to help accurately identify those applicants who may have little chance to succeed or who are likely to require disproportionate demands on institutional

resources (Willingham, 1990). The larger group, the accepted applicants, should provide the institution with a diverse group of students who will be successful with appropriate resources and coursework. Other institutional goals may include to maintain a student body with an appropriate demographic and ethnic mix and to attract students with varied interests of study. Some insure that each recruited class has diverse talents useful to the college community, such as art, music, leadership, athletics, or technical skills (Willingham, 1990).

Competition for a limited number of available admission slots may cause some prestigious, highly selective colleges to deny admission to two-thirds of their applicants (Sturgeon, 1993). On the other hand, economic conditions may influence some colleges to compromise admissions standards, thus lowering the quality of students admitted, yet offering opportunities to students who may not otherwise have qualified. Some institutions fear that lowering admissions standards may result in lowering performance standards. This is not necessarily so according to Astin (1985). Performance standards may remain the same but underprepared students may need more time and/or more institutional support to maintain the standard. If increased time and support are not offered to these students, a higher dropout rate may occur, thus allowing the institution to maintain its performance standards. Another concern institutions have regarding lowering standards is the dilution of the education of the better students by allowing programs to become less demanding. Whether this occurs or not is determined by the institution's acceptance of the challenge to provide proper diagnosis, proper placement, and adequate support to students.

Criteria for Admissions

What criteria do colleges and universities use in making admission decisions? GPA and RIC have been the most popular criteria used by colleges in the admissions process. According to a survey conducted by George Mason University in 1992-93, of the 1,109 four-year colleges and universities surveyed, 61.6% placed RIC in the top five admissions factors (Levy and Riordan, 1994). Gilman and Swan (1989) referred to four purposes of using GPA and RIC: competition for GPA and RIC is a motivator for students; most colleges and universities use RIC in the admissions process and use it as a predictor for college success; and GPA and RIC are used in the determination of grants and scholarships.

Tan (1991) stated that it appeared that GPA was a relatively good predictor for college performance. He found what appeared to be a direct correlation between the student's high school GPA and his/her GPA in a professional curriculum. Previous studies measured pre-college attributes, either high school records or standardized test scores, but, these studies ignored the decision process of self-selection: to attend college or not, which college to attend, and the admissions decisions made by the colleges. Therefore, the relationship between high school records and college success or SAT scores and college success are underestimated in the population (Manski, 1983). Manski maintained that both high school rank and SAT scores are about equal and that both are strong predictors of college performance.

Table 1

Probability of Drop Out

<u>Combined SAT Score</u>	<u>Class Rank (percentile)</u>				
	<u>0</u>	<u>25</u>	<u>50</u>	<u>75</u>	<u>100</u>
500	.86	.79	.70	.60	.49
700	.78	.69	.59	.48	.37
900	.68	.58	.47	.36	.26
1100	.57	.46	.35	.25	.17
1300	.44	.34	.24	.16	.10

Note. Adapted from College choice in America (p.153), by C. F. Manski and D. A. Wise, 1983, Cambridge, MA: Harvard University Press. Table 1 indicates that as the SAT scores increase and/or as the RIC increases, the probability of dropout decreases.

Some institutions are moving toward RIC and away from GPA as an admissions standard. Georgetown University does not use GPA because the standards for grading vary from school to school (Lockhart, 1990). However, Georgetown does use RIC, reasoning that at least it shows how that student did when compared with classmates. Although GPA and standardized tests have been significant factors in admissions decisions, RIC is slowly receiving its deserved recognition.

Support for RIC

Historically, GPA and RIC have been reasonably accurate predictors for college success, according to Dennis Hendrickson, Associate Director of

Admissions, University of Northern Iowa (personal communication, January 30, 1996). Hendrickson believes that RIC is the best single predictor of college success, yet it can be even more effective when used with standardized tests.

These data (see Table 2, p. 6) support this theory and reflect the high school rank of students who entered UNI as freshmen and graduated from UNI within six years. Using UNI as an example, these data indicate the strong correlation between RIC and graduation rate for classes entering in 1965-1988.

The Iowa Board of Regents sets the basic admission requirements for the three state universities in Iowa, regarding minimum rank of high school applicants. Students applying to one of the state universities in Iowa, must have graduated from approved high schools, must have met the core course requirements, and must be in the top half of their graduating class in order to be admitted. RIC is one of the major determining factors for admission to the three state universities in Iowa.

Another reason RIC is gaining support is that it has the advantage of being readily available to colleges and universities. A study conducted by the National Association of Secondary School Principals in 1981, found that 97% of the high schools reported RIC (Gilman, 1989). RIC has been relatively easy for admissions counselors to analyze. The growth of computer usage in high schools and colleges has improved the production and transfer of this data.

Although RIC is a strong predictor for college success, it is important that each student choose the right school, the appropriate curriculum, and get involved

Table 2

Students Graduating from University of Northern Iowa within Six Years

<u>Entry Year</u>	<u>Total Entered</u>	<u>Graduate Percent</u>	<u>Rank-In-Class</u>						
			<u>99-90</u>	<u>89-80</u>	<u>79-70</u>	<u>69-60</u>	<u>59-50</u>	<u>49-25</u>	<u>24-00</u>
1965	2101	46%	67%	54%	44%	39%	28%	30%	30%
1970	2154	48%	59%	57%	51%	46%	35%	28%	17%
1975	2048	45%	67%	52%	46%	40%	35%	23%	18%
1980	2054	48%	68%	54%	50%	52%	41%	29%	32%
1985	2032	54%	75%	60%	60%	51%	45%	34%	23%
1986	1907	62%	78%	70%	62%	56%	44%	50%	13%
1987	1753	63%	80%	68%	65%	53%	46%	43%	20%
1988	1898	61%	82%	71%	62%	57%	46%	38%	6%

Note. Adapted from, Persistence at the State Universities, University of Northern Iowa, Iowa State University, and University of Iowa, 1965-1988.

in the college community. It is becoming apparent that student involvement in the social and intellectual life of an institution not only helps improve student retention but also helps students in the learning process (Tinto, 1993). Astin's Involvement Theory addresses the effect student involvement has on student learning and development. He believes quality and quantity of physical and psychological energy enhance the college experience. There are five broad categories of student involvement: academic, with faculty, with student peers, in work, and other forms of involvement (Astin, 1993). All of these factors affect student retention. Capabilities may not be a factor if a student is unhappy with the university, the curriculum, or the school environment, including social life and extracurricular activities. RIC may be the best single predictor for college success and retention, but the proper environment must be provided to increase the likelihood of student success.

Weighted Grading Affects RIC

A new concept that is becoming more popular in secondary schools is weighted grading or weighted averages. Weighted grading has a definite influence on GPA and RIC. Weighted grading is "...a system whereby certain courses such as honors and advanced placement courses add a specific percent increment of the base grade traditionally computed to the unweighted average" (Talley, 1989). In short, in a high school using weighted grading, a student would receive a 5.0 grade point for an A in a selected class, instead of a 4.0 for an A in a non-selected class. Some schools may choose to use a percentage weight for selected advanced placement classes, instead of the fixed increment addition. Although there are many variations of weighted grading, the concept remains the same.

A survey conducted by George Mason University in 1992-93 indicated that over 71% of colleges favor weighting, but only 48% of the high schools were implementing this grading system. Three advantages of weighted grading are: it encourages students to take more challenging prep courses and rewards them for taking those courses; it increases GPA and RIC; and it gives more credibility to the class ranking (Talley, 1989). Talley also believes that students with weighted grades have a definite advantage in the college admission process over those who do not have it. Although weighted grading may create an inequity for those students who do not have weighted grading available to them, it is welcomed by admissions counselors. Weighted grading, as long as it is explained accurately, saves time, makes records easier to analyze, and thus makes decisions easier.

Complicating Factors

Weighted grading, the perceived value of RIC, the increase in outcome-based education, and class positioning are making the admissions decision process more difficult for colleges and universities. There also appears to be a perception problem between secondary schools and colleges as to the role RIC should have in admissions decisions. The George Mason University survey also identified the factors colleges and high schools rated as the most important in making college admissions decisions. Colleges rated RIC as the fourth most important factor for admission, while high schools rated RIC tenth. This survey indicated there may be a difference in perception of the value of RIC between high schools and colleges. It also revealed that 7% of the high schools surveyed already had quit calculating rank, and that 37% are considering new evaluations that will make ranking difficult. Some schools believe RIC is used to prevent the lower ranking students

from being admitted into colleges. Others do not recognize or understand the strength of RIC in predicting college success. If this change takes place as indicated, the colleges which use RIC as an evaluation factor will need to make some kind of an adjustment to compensate for the change in data being provided by the high schools. This difference in perception is counter-productive to an increase in the use of RIC.

Another complicating factor is the implementation of outcome-based education into some high schools. This concept is based on the premise that all students are capable of achieving excellence. The school maximizes learning opportunities by specifying outcomes, determining instructional assignments, and providing a climate suitable for quality education. Theoretically, all students could receive A's because the grade received is based on a certain mastery level; time is not a factor. Hendrickson (personal communication, January 30, 1996) indicated that generally students' GPAs from outcome-based systems tend to be higher than those from traditional systems and that some schools refuse to provide class rank to colleges. Both of these points impact college admissions.

Hendrickson also pointed out another situation where RIC was being compromised. An urban school district, in an effort to help more of their students qualify for college, started reporting class position instead of rank. All students having the same cumulative grade point average share a position. The students having the next average grade point share the next position. An example of positioning is a class which has ten students with a 4.0 GPA and five students with a 3.9 GPA. In positioning, the 4.0 students would share position one, and those with the 3.9 would share position two. Using traditional ranking in this class,

those with 3.9 GPA would share the rank of eleven, not two. For colleges using RIC, more students would qualify for admission if high school position was provided instead of true rank, as long as no other adjustments were made.

Absence of RIC

Hendrickson believes "...in the absence of RIC, there will be an increase in the use of standardized test scores to support GPA and RIC" (personal communication, January 30, 1996). The use of standardized test scores for predicting college success is a much debated topic. Some believe standardized tests were designed to be supplements to grades and/or rank and that they should be used only as "rough measures of potential" (Sturgeon, 1993). Standardized, multiple-choice tests are not good indicators of development or predictors of future performance in several important areas. They have a tendency to be too narrow and specific in certain areas; one should be careful in generalizing the test scores in these specific areas (Astin, 1993). Also, some critics of standardized tests believe ethnic minorities are at a disadvantage entering college because they neither score as high on standardized tests, nor have as high grades in high schools, as white students. For minorities, the lower test scores are more of a handicap for admission to college than lower high school grades (Astin, 1985).

Sturgeon (1993) suggested that college admissions professionals develop an admission philosophy which can be tested for fairness and reliability, has clarity and can be explained in lay terms so that expectations and requirements can be easily understood by admissions officers and applicants. As colleges and universities expand criteria used for admission, Sturgeon's suggestion should have an influence on what criteria is to be used and how it is to be measured. GPA,

RIC, and standardized test scores will continue to be a part of the process, as long as they are available. College admissions counselors feel relatively confident in decisions made using these criteria, and they will be reluctant to change the process. The SAT and ACT will need to be continually monitored, evaluated, and improved in format to ensure that the results can be effective in the evaluation process. Essays written by the applicant may be required, as they are required by a few colleges today.

The use of personal references may re-enter the admission process. Application forms may need to be revised to allow room for more details about extra-curricular activities, work history, and other pertinent information in order to help admissions counselors understand and analyze each student.

Conclusions

It is difficult to predict where the college admissions process is going but it is important to understand and realize the importance RIC could or should make in the future. RIC is the single most effective predictor for college success. As Manski implied in 1983, RIC as a predictor of college success is underestimated in the population. Why is it underestimated? Is there need for more education of admissions personnel and high school administrators as to the effectiveness of using RIC? Why is RIC such a strong predictor? Is there a hidden quality factor in higher ranking high school students that is being overlooked, such as involvement in various activities? Astin indicates involvement in activities increases the learning process and increases student retention. As RIC is evaluated, is it only being evaluated from an academic perspective and not

inclusive of other factors? More research on the various qualities of high school students in relation to student rank is needed.

Perhaps each college will need to devise its own admission entrance examination to aid in accomplishing a more equitable evaluation of each applicant. Personal interviews may be considered, but time and cost may be limiting factors. Although, for students who do not meet the minimum requirements, a personal interview with an admissions counselor may be necessary to supplement high school records.

More and better communication is needed between colleges and high schools with respect to shared goals and the direction of our educational system. Colleges need to take the initiative and to assume a leadership role. If secondary and postsecondary institutions can share the goal for student success in development and academics, then why can they not agree on admissions factors? All the information needed to calculate RIC is available, thus it has good accessibility. Computers have helped make the computation of RIC relatively easy and economically feasible. History and research have proven RIC to be a strong predictor of college success. It is encouraging to find a student evaluation tool, such as RIC, which is accurate, economical, and accessible. Until a stronger predictor for college success emerges, rank-in-class must remain a part of the college admission process.

References

- Astin, A. W. (1985). Achieving educational excellence. San Francisco: Jossey-Bass, Inc.
- Astin, A. W. (1993). What matters in college?, San Francisco: Jossey-Bass, Inc.
- Gilman, D. A. & Swan, E. (1989). Solving g.p.a. and class rank problems. NASSP Bulletin, 73(515), 91-97.
- Iowa State Board of Regents. Persistence at the state universities, Reports of entering freshman classes of 1965, 1970, 1975, 1980, 1985, 1986, 1987, and 1988.
- Levy, J. & Riordan, P. (1994). Rank-in-class, grade point average, and college admissions. National Association of Secondary School Principals 1993 Study, Reston, VA: NASSP.
- Lockhart, E. (1989). Heavy grades? A study on weighted grades. The Journal of College Admission, 126, 9-16.
- Manski, C. F. & Wise, D. A. (1983). College choice in America. Cambridge, MA: Harvard University Press.
- Miller, S. S., Rivell, J. A., & Walker, B. (1991). Weighted admission standards at public flagship universities. The Journal of College Admission, 131, 15-19.
- Sturgeon, T. V. (1993). Creating a standardized, systematic, and testable rating framework for competitive admission. The Journal of College Admission, 142, 6-13.

Talley, N. R. (1989). Weighted averages and college admission. The Journal of College Admission, 125, 19-21.

Tan, D. L. (1991). Grades as predictors of college and career success. The Journal of College Admission, 132, 12-15.

Tinto, V. (1993). Leaving college. Chicago: The University of Chicago Press.

Willingham, W., Lewis, C., Morgan, R., & Ramist, L. (1990). Predicting college grades: An analysis of institutional trends over two decades. New York: College Board Publications.