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An Analysis of Academic Reputation as Perceived by Consumers of Higher Education

Michael J. Conard
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ABSTRACT. A college's academic reputation (AR) plays a significant role in positioning the institution. Survey responses of college-bound high school seniors suggest that a majority of respondents view successful postgraduate careers as very important to the perception of AR and very likely to be attributed to a college with very good AR. A principle components factor analysis revealed three factors that describe the perception of AR (i.e., Academic Concerns, Campus Ethos, Practical Value). In a similar analysis three factors were found likely to be associated with very good AR (i.e., Curricular Concerns, Exclusivity, Career Preparation). *[Article copies available for a fee from The Haworth Document Delivery Service: 1-800-342-9678. E-mail address: <getinfo@haworthpressinc.com> Website: <<http://www.HaworthPress.com>>]*

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The employment of effective marketing strategies by colleges and universities, as related to the college selection process, has been considered by researchers for at least two decades (Litten, 1979; Maguire

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and Lay, 1981) and became increasingly important as enrollments declined and competition for students increased through the late 1980s and 1990s (Comm & LaBay, 1996; Goldghen, 1989; Neustdat, 1994). Although previous research (Carnegie Foundation, 1986; Johnson, Stewart, and Eberly, 1991; Murphy, 1981; Theus, 1993) found academic reputation (AR) to be an important influencing variable in the college selection process, the components of AR have not been identified. There is a need for higher education administrators to understand more fully this important variable so that more effective marketing strategies may be developed.

Although much research has been done in recent years on the college selection process, much more research exists on how consumers purchase low involvement products. Put in perspective, more is known about how consumers purchase soap, laundry detergent, and salted snacks, as available through commercial sources, than about how high school seniors select the college they will attend. A college education is not only one of the most expensive purchases that many people will ever make, but also one that has lifelong ramifications in terms of occupation, income and lifestyle.

In one area of inquiry, researchers have focused on the application of marketing principles to various academic administrative activities, such as recruitment and selection of applicants, communications, and academic program assessment (Fairweather and Brown 1991; Goldghen 1989; Johnson and Sallee 1994; McDonough 1994; Simmons and Lacznac 1992; Topor 1986; Williams, Toy, and Gormley 1993). However, another area of research has focused on the decision-making behavior of the target market (i.e., college-bound high school seniors). The focus of this research area has been to identify and understand important decision making variables involved in selecting a college to attend. To this end, studies have identified and assessed the relative importance of an array of selection variables, including tuition cost, campus size, academic programs, recommendations, academic reputation (AR), and location (distance from home), by surveying college-bound high school seniors, newly accepted applicants, or newly matriculated college freshmen.

Maguire and Lay (1981) analyzed responses of newly accepted applicants to Boston College, and found that financial aid, parents' preference, specific academic programs, school size, campus location,

athletic facilities, and social activities best predicted choice of Boston College over a competing college.

Vaughn, Pitlik, and Hansotia (1978) surveyed students and parents of students who had been admitted to an undergraduate business program, and found that academic reputation was rated as extremely important as a factor in choosing a college. Among 16 criteria, quality of education ranked first, while quality of faculty, reputation of the business program and academic reputation of the university tied for second.

In 1981, Murphy reported on a survey of 186 high school seniors at six Milwaukee area high schools chosen by a judgment sampling method. The respondents were randomly selected by guidance counselors who had been furnished the questionnaires. In addition to examining the relative importance of various sources of influence in determining college choice, the factors affecting students' college choice were also studied. Those factors, in rank order of importance, were: AR; Cost; Location of Campus (urban, rural); Distance from Home; Size of Campus; and Parental Opinion. Murphy's findings, particularly with respect to AR and Cost, closely parallel those of Vaughn, Pitlik, and Hansotia (1978).

In a nationwide survey of high school seniors and their parents regarding the process of college choice, the Carnegie Foundation for the Advancement of Teaching (1986) found that 83% of parents and 84% of high school seniors agreed that if a college has a good academic reputation, its graduates usually get better jobs. Further, respondents generally did not agree that schools with outstanding athletic teams would have above average academic programs, nor that higher tuition cost was associated with quality of education. Only 35% of parents and 37% of high school seniors agreed that older colleges with their traditions offer better education. Less than half of respondents agreed that quality of instruction at small colleges is no better than at large colleges, yet over 50% of respondents agreed that small classes are necessary for quality learning to occur.

Murphy (1981) prudently suggested that future research was needed in order to identify "the precise attributes that contribute to academic reputation or excellence in the minds of prospective students" (p. 149). Although studies have indicated that AR is one of the most important criteria in selecting a college to attend, and the results of the Carnegie Foundation (1986) survey offer an intriguing hint at some

factors that may inform an analysis of AR, Murphy's call for research to identify specific attributes of AR has gone largely unanswered.

A thorough understanding of the attributes of this important influencing variable is necessary from a theoretical perspective. Additionally, it is important from an applied perspective since AR has important implications for institutional positioning and promotional strategies. The present study sought to fill the gap in knowledge by assessing: (1) the relative importance of attributes that might comprise AR; (2) the likelihood that particular attributes might be possessed by a college with a very good AR; and (3) the dimensions that underlie both AR and very good AR.

METHODOLOGY

Sample and Procedure

Questionnaires were mailed to 1004 college-bound high school seniors residing in New York, New Jersey, Pennsylvania, Florida, and the six New England states. High school seniors were surveyed as opposed to college freshmen, as in other studies (e.g., Bowers and Pugh, 1973; Litten, 1979; Vaughn, Pitlik and Hansotia, 1978) to preclude any potential bias associated with respondents already attending a college. Respondents were contacted in November of their senior year, before most would know their own admissions status, thereby reducing or eliminating that potential influence on their perception of AR.

The sample was randomly selected from a database of 74,292 which was obtained from the National Research Center for College and University Admissions (NRCCUA). Several measures were taken to increase the response rate, including an advance notification postcard, a personalized cover letter highlighting the importance of participation, a stamped, addressed return envelope, and a reminder postcard. The inclusion of an incentive (e.g., money) has been associated with higher participant response rates, however none was offered in this study due to financial constraints.

A total of 198 respondents (19.7%) returned questionnaires. Although this appears to be a low return rate, a typical rate of return for mail surveys is around 30 percent (Shaughnessy and Zechmeister, 1994). Importantly, the 198 respondents were representative of both the sample and the database in terms of gender and state of residence

as indicated in Table 1. Although no other demographic data on the database were available, the mean reported SAT score of respondents was 1036 as compared to the national mean score of 910 for that year (College Board 1995).

Questionnaire Development

One focus group was conducted with college-bound high school seniors at a high school in the Northeast. The general areas of discussion were based on the findings of the reviewed literature which included evaluative criteria (e.g., tuition cost, availability of particular programs) and information sources (e.g., parents, friends, teachers, guidance counselors) used by these high school seniors in the college selection process. A more focused discussion of issues not found in the literature attempted to uncover and identify the attributes of AR, how the perception of AR is formed, and the relative importance of AR in the selection process. The findings established the existence of particular attitudes and the information obtained was used to construct questionnaire items.

Subsequent to the focus group, a questionnaire of 16 items, based solely on the focus group perceptions, was developed to identify and assess the attributes of AR. For items 1-10, respondents were asked to

TABLE 1. Demographics of Database, Sample, and Respondents

	Database (N = 74,292)	Sample (N = 1004)	Respondents (N = 198)
Male	35.2%	36.7%	31.9%
Female	64.8%	63.3%	68.1%
CT	3.9%	4.3%	3.0%
FL	25.5%	25.9%	27.3%
MA	6.9%	7.3%	3.5%
ME	1.7%	1.7%	2.5%
NH	1.6%	1.1%	1.0%
NJ	12.0%	12.8%	9.1%
NY	23.3%	23.0%	22.7%
PA	22.8%	22.0%	26.3%
RI	1.8%	1.5%	0.5%
VA	0%	0%	0.5%*
VT	0.5%	0.4%	1.0%

*Note.-One respondent reported State as VA, most likely due to mail forwarding.

indicate the importance of variables, (e.g., ability to get a “good job” after graduating, teaching expertise of faculty) in determining a college’s AR on a seven-point scale from 0 = not at all important to 6 = extremely important. For items 11-16 respondents were asked to indicate the likelihood that each variable would be true about a college with a very good AR on a seven-point scale where 0 = not at all likely to 6 = extremely likely. Descriptions of all items are presented in the results section.

RESULTS AND DISCUSSION

A Studentized Range test was computed using the means of items 1-10 to determine the relative importance of each item as related to the perception of AR. The results in Table 2 show that respondents viewed the ability to get a good job after graduating as very important in determining the perception of AR followed by teaching expertise of the faculty. Respondents rated five variables (i.e., number of different majors offered, technological facilities, tuition cost, difficulty of courses, academic quality of students enrolled) as being moderately important. Two variables (i.e., campus setting, difficulty of being accepted) were next in order of importance but still in the moderately important range. Finally, one variable (i.e., number of buildings on campus) was rated as least important in determining the perception of AR. The relatively low standard deviations of ability to get a “good job” after graduation (0.90) and teaching expertise of the faculty (0.96) suggests a substantial amount of agreement among participants that these two items were very important to the perception of AR.

Items 11-16 asked respondents to indicate the likelihood that the item would be true about a college with a very good academic reputation. The means for ratings of items 11-16 are presented in Table 3. A Studentized Range test was computed using the means of items 11-16 to determine the relative likelihood of each item being associated with very good AR. Table 3 indicates that two variables (i.e., large percentage of graduates in successful careers, up-to-date technological facilities) were rated as very likely to be associated with very good AR. However, the latter variable did not differ significantly from two other variables (i.e., challenging/difficult courses, distinguished faculty) that were rated as moderately likely to be associated with very good AR. Finally, respondents rated one variable (i.e., accept only academi-

TABLE 2. Mean Importance of AR Variables (n = 198)

<u>Rank</u>	<u>Item No.</u>	<u>Variable</u>	<u>Mean</u>	<u>S.D.</u>
1	1	Ability to get a good job after grad.	5.41 _a	0.90
2	2	Teaching expertise of the faculty	5.02 _b	0.96
3	10	Number of different majors offered	4.47 _c	1.40
4	6	Technological facilities	4.43 _c	1.26
5	5	Tuition cost	4.37 _c	1.65
6	9	Difficulty of courses	4.37 _c	1.06
7	3	Academic quality of students enrolled	4.12 _c	1.28
8	8	Campus setting	3.69 _d	1.56
9	4	Difficulty of being accepted	3.69 _d	1.39
10	7	Number of buildings on campus	2.50 _e	1.54

Note. –Means that do not share subscripts differ at $p < .05$ in the Studentized Range test. Variables were measured on a 7-point scale, from 0 = not at all important to 6 = extremely important.

TABLE 3. Mean Perceived Likelihood Scores: Variables Associated with Very Good AR (n = 198)

<u>Rank</u>	<u>Item No.</u>	<u>Variable</u>	<u>Mean</u>	<u>S.D.</u>
1	11	Large percentage of graduates in successful careers	5.26 _a	0.87
2	12	Up to date technological facilities	5.07 _{ab}	0.88
3	13	Challenging/difficult courses	4.88 _b	0.95
4	14	Distinguished faculty	4.86 _b	1.04
5	16	Accept only academically exceptional students	4.15 _c	1.51
6	15	High tuition costs	3.86 _d	1.64

NOTE. –Means that do not share subscripts differ at the $p < .05$ in the Studentized Range test. Variables were measured on a 7-point scale from 0 = not at all likely to 6 = extremely likely.

cally exceptional students) lower in the moderately likely range and one variable (i.e., high tuition costs) as the least likely to be associated with very good AR.

As indicated by the mean scores shown in Table 2, it appears that respondents view getting a good job after graduation as very important to the perception of AR, and as shown in Table 3, respondents viewed having a large percentage of graduates in successful careers as very likely to be attributed to a college or university with a very good AR.

These results regarding the relationship between successful post graduate careers and AR parallel the findings of the Carnegie Foundation (1986) (i.e., college-bound high school seniors view higher education as the means to a more successful career path and that graduates of schools with better AR get better jobs). However, as found in Table 3, item 15 (high tuition cost) had a mean score of 3.9 indicating an only Moderately Likely association with very good AR. Although this finding appears to contradict earlier research by Conrad and Egan (1989), which suggested that raising tuition increases the perception of prestige and AR, it is consistent with the focus group perceptions that high tuition cost does not always indicate a very good AR. This perception may suggest an explanation for the difference in ratings of tuition cost in Table 2, and high tuition cost in Table 3. The larger standard deviations in Table 2 as compared to Table 3 may indicate that respondents were thinking more generally about AR (e.g., good or bad) in rating items 1-10. This difference in standard deviations, however, may be due to the questionnaire design (i.e., items 11-16 were to be thought of in association with only very good AR).

A principle components factor analysis with varimax rotation was performed on items 1-10 to identify underlying factors contributing to the perception of AR. Three factors were extracted with eigenvalues > 1.0 and the factor loadings of items appear in Table 4. Items with factor loadings of .5 or greater were retained and used in determining appropriate factor labels. Complete factor loadings are available upon request. The factors were Academic Concerns, Campus Ethos, and Practical Value respectively. The items with the highest factor loadings were teaching expertise of the faculty (Academic Concerns), campus setting (Campus Ethos) and ability to get a good job after graduation (Practical Value) respectively.

To further examine the relationships among the factors, factor means were computed. In rank order, the factor Practical Value had a mean of 4.74 with a standard deviation of 0.84, Academic Concerns followed with a mean of 4.29 and a standard deviation of 0.81, and Campus Ethos had a mean of 3.10 and a standard deviation of 1.29. The means for Practical Value and Academic Concerns were well above the midpoint of the scale, and their relatively low standard deviations indicate substantial agreement about their level of importance. The mean for Campus Ethos, was near the midpoint of the scale, indicating that it is moderately important for AR.

TABLE 4. Factor Analysis with Varimax Rotation for Variables Describing the Perception of AR

<u>Item</u>	<u>Academic Concerns</u>	<u>Campus Ethos</u>	<u>Practical Value</u>
Teaching expertise of faculty	.73557		
Academic quality of students enrolled	.65960		
Difficulty of courses	.64349		
Difficulty of being accepted	.58437		
Campus setting		.85631	
Number of buildings on campus		.71708	
Ability to get a good job after graduation			.65165
Tuition cost			.64489
Technological facilities			.58490

A second principle components factor analysis with varimax rotation was performed on items 11-16 to identify the underlying factors associated with very good AR. Three factors were extracted and the factor loadings of items appear in Table 5. Factor 3, unlike factors 1 and 2, had an eigenvalue < 1.0 (.85) but was included in the analysis due to its contribution of 14.2% variance and high factor loadings of two items. Items with factor loadings of 0.5 or greater were retained and used in determining appropriate factors labels. Complete factor loadings are available upon request. The factors were Curricular Concerns, Exclusivity, and Career Preparation respectively. The items with the highest factor loadings were distinguished faculty (Curricular Concerns), high tuition cost (Exclusivity) and large percentage of graduates in successful careers (Career Preparation) respectively.

Computation of these factor means showed that the likelihood of association for Career Preparation was 5.16 with a standard deviation of 0.73, followed by Curricular Concerns with a mean of 4.87 and a standard deviation of 0.88, and Exclusivity with a mean of 4.01 and a standard deviation of 1.39. The mean for Career Preparation indicates that it is considered to be “extremely likely” to be associated with colleges with very good AR, and its relatively low standard deviation indicates substantial agreement on that factor. All factor means were above the midpoint of the scale, indicating that all are at least moderately likely to be associated with very good AR.

TABLE 5. Factor Analysis with Varimax Rotation for Variables Associated with Very Good AR

<u>Item</u>	<u>Curricular Concerns</u>	<u>Exclusivity</u>	<u>Career Preparation</u>
Distinguished faculty	.87737		
Challenging/difficult courses	.82391		
High tuition cost		.87060	
Accept only academically exceptional students		.81444	
Large percentage of graduates in successful careers			.90410
Up-to-date technological facilities			.71260

CONCLUSIONS AND IMPLICATIONS

The results of previous studies suggest that AR is of primary importance in the college selection process. The present study has added to that body of knowledge by assessing: (1) the relative importance of attributes that might comprise AR; (2) the likelihood that particular attributes might be possessed by a college with a very good AR; and (3) the underlying dimensions of both AR and very good AR.

The majority of respondents viewed successful post-graduate careers as very important to the perception of AR, and as very likely to be characteristic of a college or university with a very good AR. The findings also indicate that the ability to get a good job after graduation is more important to the perception of AR than teaching expertise of the faculty. While it is questionable how a high school senior could or would evaluate teaching expertise of faculty at any college or university, focus group responses indicated that professors as well as graduate teaching assistants were thought of as members of the faculty. Teaching expertise was associated with the former and not the latter.

Two variables (large percentage of graduates in successful careers, and up-to-date technological facilities) were found very likely to be associated with very good AR and high tuition costs was least likely to be associated with very good AR. This perceived relationship between high tuition cost and very good AR suggests, as found in the previously mentioned focus group, that respondents believe high tuition cost does not automatically mean very good AR.

Principle components factor analyses with varimax rotation were performed on the variables involved in determining the perception of AR and also on those variables likely to be associated with very good AR. The three factors extracted and found to underlie the perception of AR were: Academic Concerns, Campus Ethos, and Practical Value. The three factors extracted and found likely or extremely likely to be associated with very good AR were: Curricular Concerns, Exclusivity, and Career Preparation.

While further research would be needed to confirm the findings of this study, the marketing implications are that colleges and universities might enhance their perceived AR and subsequently their relative attractiveness in the minds of the target market (i.e., college-bound high school seniors) by incorporating the following actions into their strategic planning: encourage students to participate in career development activities and encourage well-known organizations to actively recruit on campus; communicate the level of faculty involvement in teaching and contact with students; develop policies and procedures, when consistent with the mission of the institution, which would reduce the percentage of courses and students taught by teaching assistants; maintain up to date technological facilities; and design curricula to provide students an education with the requisite knowledge and skills (e.g., current theories and critical thinking) to engage in successful careers.

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