

Considerations in the Decision to Apply for Graduate Studies: A Case Study

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Introduction

During the 1990s, graduate enrollment nationwide grew slowly notwithstanding a steady growth in international enrollment. This was undoubtedly a source of concern at many universities. For example, at the University of Arizona, where the author was appointed graduate dean in 1999, graduate enrollment peaked in 1994, followed by a period that included years of decreases. In response and with particular concern for the financial implications of the decline, the central administration made it a priority to “do something” about graduate enrollments. Moreover, the University of Arizona, along with most others in the nation, was seeking to increase the diversity of its graduate student body.

To help us attract both a larger and more diverse pool of qualified applicants, we wanted to learn more about what motivated students to apply and how this differed by the degree being sought, gender, and ethnicity. Our review of the literature found some good studies on the subject (Baird 1973, Hartnett 1979, Malaney 1985 and 1987, Olson & King 1985 and Olson 1992) but they had been done years earlier when the student body was less complex and did not give us the details we wanted about the differences that might exist between relevant subgroups. Therefore, we decided to undertake our own survey of prospective students in order to explore what most influenced their decisions to apply. Our goal was to develop information that might help us and others improve our ability to attract applications to our programs.

Method

We designed a survey that asked applicants to UA's graduate college to rank the importance of 23 factors that we thought might be affecting their decision to apply. The survey included many of the same factors studied in the previous literature, to provide for comparability, as well as other factors. It was not our intention to study the decisions that follow admission, namely whether to attend and, if so,

where, but it should be understood that the decision to attend a particular graduate program is a multi-staged process that is not fully captured in our survey results.

The survey was mailed to prospective students

along with requested application materials during the 2000-2001 and 2001-2002 academic years. Over 2,700 completed surveys were returned, producing a sample that was representative of the university's existing graduate student population. The respondents were 49% male, 45% doctoral, and 13% underrepresented minority (defined as Native American, African American, and Hispanic), compared to a 49% male, 43% doctoral, and 13% underrepresented minority in the exist-

ing student body.

Applicants were asked to rank the importance of the 23 factors using a Likert scale where 5 was ‘very important,’ 3 was ‘somewhat important,’ and 1 was ‘unimportant.’ The data were merged with other information from their official applications including their gender, race, and degree sought, when available. The data were then analyzed using descriptive and inferential techniques. Two sets of results were produced. The first set is given in Table 1, which shows the results, ranked by importance and disaggregated by degree sought, gender, and ethnicity. The second set is given in Tables 2 and 3, where masters and doctoral applicants are looked at separately, again broken down by degree sought, gender, and ethnicity.

Results

The most important factor overall in the decision to apply was the perceived match between a degree program and an applicant's specific interests. Seventy-six percent of the respondents said it was very important. The reputation of the department and/or its faculty, the program having accreditation, the work of an individual professor, the responsiveness of the faculty or staff to queries by the applicant, and the reputation of the university in general were other highly ranked concerns, all receiving an average rating of 4 or higher on the 5 point scale.

The least important factor was proximity to the applicant's place of residence. Nearly half those surveyed viewed it as unimportant. Other non-academic, lifestyle factors, including location, quality of life, and climate, were also rated as unimportant.

The cost of attending the university and the lower cost of living in the region compared to other places were somewhat important factors but also not as important as academic considerations. They were, however, considered more important than lifestyle matters and could well become more important once a student is admitted and is considering offers of financial aid or support.

Table 1: Ratings of Factors by All Applicants and Subgroups

5 = very important, 3 = somewhat important, 1 = unimportant

	All n=2706	Females n=976	Males n=953	Ph.D.s n=825	Masters n=996	Whites n=1004	Minorities n=147
Match between a UA degree program and your specific interests	4.61	4.67*	4.58	4.61	4.64	4.68	4.79
Reputation of the department and/or its faculty	4.43	4.44	4.42	4.46	4.43	4.43	4.51
Degree program having accreditation	4.19	4.33***	4.05	4.09	4.26**	4.33	4.52
Work of individual U A faculty member	4.18	4.17	4.16	4.25**	4.09	4.15	4.24
Responsiveness of department faculty and/or staff to your queries	4.16	4.25***	4.05	4.09	4.20*	4.12	4.45***
Reputation of the UA in general	4.06	3.98	4.11**	4.03	4.08	3.93	4.19**
Advice of professors at another university	3.45	4.05	4.00	4.31	4.52	4.07	4.33***
Recommendation(s) from a former student(s)	3.83	3.83	3.86	3.74	3.94**	3.73	3.95
Ranking of degree program by professional societies in the field	3.76	3.76	3.77	3.85*	3.69	3.64	3.85
Ranking of degree program in US News and World Report	3.60	3.45	3.61*	3.52	3.61	3.23	3.14
Cost of attending the UA	3.60	3.67***	3.47	3.35	3.73***	3.52	3.76*
Printed material published by the program	3.49	3.51	3.46	3.45	3.53	3.28	3.71***
Program's web site	3.48	3.44	3.48	3.44	3.48	3.24	3.42
Comparatively lower cost of living in Tucson vs. other places	3.46	3.43	3.42	3.30	3.55***	3.27	3.59*
Advice of friends or relatives	3.45	3.40	3.47	3.31	3.52**	3.28	3.76***
Quality of life in Tucson	3.25	3.31*	3.18	3.14	3.32**	3.29	3.65***
Ranking of degree program by National Research Council	3.19	3.07	3.22*	3.23	3.15	2.72	3.04
Climate in Tucson	3.08	3.10	3.08	2.98	3.16**	3.15	3.34
Location in the Southwest	3.00	3.10**	2.91	2.84	3.14***	3.17	3.45*
Ranking of the program by Princeton Review	2.97	2.86	2.83	3.03	2.89	2.64	3.01*
Write-up on the program in Peterson's Guide	2.88	2.91	2.92	2.95	2.80	2.46	2.60
Ranking of degree program by Money Magazine	2.43	2.36	2.48	2.49	2.41	2.12**	2.54**
Proximity of UA to where you current ly live	2.42	2.48**	2.27	2.08	2.50***	2.36	3.33***

P Values: ***p ≤ .001, **p ≤ .01, & *p ≤ .05

Information provided by programs was ranked at the same moderate level as cost factors. Notably, there was no difference in the scores for web- and print-based materials. At least for now, printed and on-line materials seem to be equally, if

only modestly, influential.

The findings on third party rankings and reports were mixed. *Money Magazine*, *Princeton Review*, and *Peterson's Guide* were viewed as unimportant, while rankings by the National Research Council, *U.S. News* and professional societies were somewhat influential. However, the reputation of the department and/or its faculty was one of the most important con-

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siderations. The possibility should not be ignored that these third parties are at least partly responsible for program reputations. Furthermore, third party rankings may be particularly sensitive to discipline. For example, even though for all fields, rankings by *U.S. News* were only somewhat important, they were very important for the average applicant to management, electrical and computer engineering, and higher education. The sample wasn't large enough to analyze the responses for all the majors, but the distributions of responses to the questions about third-party rankings corresponded less well to a normal statistical distribution than those of other questions. It is reasonable to hypothesize that while these rankings were only somewhat important overall, they are probably very important in certain fields of study.

When the results were broken down by degree being sought, both similarities and differences emerged. Both groups ranked match and reputation as highly important with no significant difference between their means. However, doctoral applicants were more influenced by the work of an individual faculty member and rankings by societies in the field while master's applicants were more influenced by responsiveness to their queries and program accreditation. These results tend to underscore the more academic orientation of doctoral students and the more professional or career focus among master's students. Several of the cost and lifestyle factors also were more important to the master's than the doctoral applicants, although they still were less important in their decision than the programs' academic credentials and response to queries.

Looking at the data by gender, we again found both similarities and differences, although fewer than between doctoral and master's students. The most significant differences were that women put more importance on program accreditation, responsiveness to queries, and cost. Men, on the other hand, had somewhat greater concern for reputation and rankings.

The most differences were found between white students and underrepresented minorities. For example, the largest difference found, indeed the largest found between any of the groups in the study, was the greater sensitivity among underrepresented minorities to UA's proximity to their current place of residence than among white students. Sixty-four percent of minorities ranked proximity as important, while 60 percent of white students ranked proximity as unimportant. In addition, minorities were much more concerned with responsiveness, printed materials, and advice from professors, friends and families.

Finally, we examined master's and doctoral students separately, broken down by gender and ethnicity. We found somewhat fewer significant differences between the subgroups in this comparison. For

example, the mean scores of men and women master's applicants were significantly different for only 6 factors compared to 10 factors for all applicants. In addition, the differences between the mean scores of master's and doctoral applicants separately were of approximately the same size as that of all applicants. Thus, in general we find that men compared to women, and white students compared to minorities exhibit similar differences from one another in their weighting of factors, regardless of whether they are applying for master's or doctoral programs.

Discussion

With the exception of responsiveness to inquiries, the leading factors all speak to the quality, reputation, and emphases of programs and universities. This finding is nearly identical to the results produced 3 decades ago by Baird (1973) and Hartnett (1979), which speaks to the durability of these considerations. What's also notable, however, is that responsiveness during the search process is considered as equally important as academic concerns. This supports the findings of Olson & King (1985) and Olson (1992) that personal contact is critical for

successful recruitment. We add to their findings by observing that females, master's, and minority students are especially sensitive to the nature of such interactions. It is interesting to note that according to the 2000 National Doctoral Program Survey

(2001), women and underrepresented minorities are more negative than other students about programs providing enough information during the application and admissions process.

The importance to applicants of finding programs that match their interests suggests the importance of providing information about the academic foci and research activities in any given program. This may be both good and bad news for those interested in reducing attrition. Recent literature on graduate student attrition has emphasized the benefits of making a good match between students and their programs. The fact that prospective students are already keenly interested in this could make it easier to improve matching with better information. On the other hand, because its very important to them, students may already have considerable information about the foci of prospective programs, so additional information may not add much to their perceptions or decisions.

Previous research has reported that institutional location is one of the most important factors in the consideration of a university (Hartnett 1973, Murphy 1981, Olson & King

Table 2: Ratings of Factors by Master's Applicants

5 = very important, 3 = somewhat important, 1 = unimportant

	All n=996	Females n=525	Males n=465	Whites n=549	Minorities n=80
Match between a UA degree program and your specific interests	4.64	4.66	4.62	4.69	4.78
Reputation of the department and/or its faculty	4.43	4.44	4.42	4.40	4.45
Degree program having accreditation	4.26	4.33*	4.16	4.38	4.57
Work of individual UA faculty member	4.09	4.06	4.12	4.05	4.23
Responsiveness of department faculty and/or staff to your queries	4.20	4.29**	4.09	4.18	4.53**
Reputation of the UA in general	4.08	3.95	4.23***	3.96	4.16
Advice of professors at another university	4.52	3.49	3.55	4.10	4.20*
Recommendation(s) from a former student(s)	3.94	3.88	4.00	3.85	4.02
Ranking of degree program by professional societies in the field	3.69	3.67	3.70	3.57	3.93
Ranking of degree program in US News and World Report	3.61	3.46	3.76**	3.30	3.34
Cost of attending the UA	3.73	3.76	3.70	3.69	3.89
Printed material published by the program	3.53	3.50	3.57	3.39	3.75**
Program's web site	3.48	3.44	3.53	3.26	3.41
Comparatively lower cost of living in Tucson vs. other places	3.55	3.57	3.53	3.40	3.69
Advice of friends or relatives	3.52	3.49	3.55	3.43	3.74
Quality of life in Tucson	3.32	3.36	3.27	3.40	3.69
Ranking of degree program by National Research Council	3.15	2.97	3.35**	2.70	3.09
Climate in Tucson	3.16	3.16	3.17	3.25	3.38
Location in the Southwest	3.14	3.23	3.04	3.36	3.60
Ranking of the program by Princeton Review	2.89	2.86	2.94	2.65	3.14
Write-up on the program in Peterson's Guide	2.80	2.76	2.84	2.49	2.41
Ranking of degree program by Money Magazine	2.41	2.37	2.47	2.23	2.60
Proximity of UA to where you currently live	2.50	2.58*	2.42	2.52	3.52***

P Values: ***p ≤ .001, **p ≤ .01, *p ≤ .05

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1985 and University of California Office of the President 2002). This is not supported by our findings. Perhaps the discrepancy is due to the fact that the University of Arizona, as a national university, attracts more interest from individuals conducting a national or even international search for graduate programs. It may well be the case that for regional schools, prospective students do place more emphasis on studying close to where they live. Our finding that location is more important to master's students than to doctoral students tends to support the hypothesis that master's students are less willing to relocate for graduate education than are doctoral students; however, even for master's applicants, location was at best marginally important. The stronger interest in proximity among minorities could have cultural or economic explanations.

We were somewhat surprised by the relatively lower emphasis placed on cost considerations. However, as was mentioned

above, we suspect that cost factors become more important overall after a student is admitted and is deciding whether and where to matriculate. This phenomenon was previously observed by Olson and King (1985), Olson (1992), Malaney (1985), and the University of California Office of the President (2002).

The results confirm the findings of Malaney (1987) that advice from professors and students is important in the decision to apply. Malaney (1987) also found that printed materials were significant sources of information. Of course, now, almost 20 years later, websites are equally useful. It is important to note, however, that printed materials are significantly more important to underrepresented minorities, perhaps due to lower average incomes and less access to the Internet. This should be considered by programs that have shifted exclusively to web based information -- especially the possible impact on their efforts to increase diversity.

Conclusion

Potential graduate students consider a variety of factors in deciding where to apply. With knowledge of what's important and to whom, institutions may be able to affect the number and mix of applicants. For example, programs might publish more details about current faculty work in their programs in order to make it easier for students to find a match between their interests and the program. They might also benefit by developing new activities that are closely related to contemporary student interests. Programs should also attempt to enhance and promote their reputations, gain accreditation, promote the work of professors, and be highly responsive to individuals who express an interest in applying. Furthermore, it should be important to those seeking to increase gender balance and diversity that women and minorities are more sensitive to certain concerns, especially respon-

siveness, accreditation, printed materials, and location. Indeed, an invigorated local recruiting program may be particularly helpful for increasing diversity.

¹The author is former Dean of the Graduate College at the University of Arizona, where he currently serves on the faculty. He wishes to thank Lisa Tarsi and Mayté Pérez-Franco for their research assistance and the reviewers at the Council of Graduate Schools for their valuable advice. Dr. Pivo can be reached at gpivo@u.arizona.edu.

Table 3: Ratings of Factors by Doctoral Applicants

5 = very important, 3 = somewhat important, 1 = unimportant

	All n=825	Females n=444	Males n=378	Whites n=365	Minorities n=52
Match between a UA degree program and your specific interests	4.61	4.68*	4.54	4.69	4.78
Reputation of the department and/or its faculty	4.43	4.56**	4.38	4.50	4.67
Degree program having accreditation	4.09	4.29***	3.92	4.22	4.39
Work of individual UA faculty member	4.25	4.31	4.20	4.29	4.41
Responsiveness of department faculty and/or staff to your queries	4.09	4.19*	4.00	4.00	4.35*
Reputation of the UA in general	4.03	4.03	4.03	3.90	4.28*
Advice of professors at another university	4.31	4.07	4.06	4.10	4.60**
Recommendation(s) from a former student(s)	3.74	3.74	3.75	3.49	3.95*
Ranking of degree program by professional societies in the field	3.85	3.85	3.85	3.68	3.88
Ranking of degree program in US News and World Report	3.52	3.50	3.54	3.17	3.16
Cost of attending the UA	3.35	3.48**	3.23	3.20	3.62*
Printed material published by the program	3.45	3.50	3.40	3.13	3.77***
Program's web site	3.44	3.44	3.44	3.20	3.47
Comparatively lower cost of living in Tucson vs. other places	3.30	3.31	3.29	3.11	3.46
Advice of friends or relatives	3.31	3.29	3.33	3.04	3.80***
Quality of life in Tucson	3.14	3.20	3.08	3.11	3.64**
Ranking of degree program by National Research Council	3.23	3.23	3.23	2.82	3.21
Climate in Tucson	2.98	2.99	2.97	3.00	3.29
Location in the Southwest	2.84	2.99	2.79	2.92	3.43**
Ranking of the program by Princeton Review	3.03	3.08	2.98	2.63	3.10
Write-up on the program in Peterson's Guide	2.95	3.00	2.90	2.43	2.97
Ranking of degree program by Money Magazine	2.49	2.39	2.58	2.01	2.67**
Proximity of UA to where you currently live	2.08	2.16	2.01	1.92	2.96***

P Values: ***p ≤ .001, **p ≤ .01, & *p ≤ .05

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