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Part-Time Versus Full-Time Students: An Examination of How the Decision Making Process to Pursue an Engineering Masters' Degree Varies Based on Student Status

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Abstract

The engineering graduate school experience, from start to finish, varies widely for different individuals. Researchers hoped to better understand the factors which impact this experience. To do this, a web-based survey was sent to numerous universities throughout the United States that asked engineering graduate students a series of questions. This paper focuses on the decision making process to pursue an engineering masters' degree, and how that process differs based on full-time and part-time student status. The team examined with whom these two groups consulted while making the decision to pursue a master's degree as well as how supportive various people in their lives were during the process. Participants were also asked how much various factors impacted their decision to pursue a graduate degree and their decision to attend a specific institution. Additionally, they were asked which strategies they used to increase the likelihood of their acceptance, what sources of information they used when researching programs, and what factors influenced their belief in their ability to succeed. The data from questions regarding the decision making process was separated by full-time and part-time status and was analyzed using the Mann-Whitney Test. From this analysis, results were obtained which can be used to better guide university marketing teams and academic advisors in their engagement with students of either type. Full-time students are far more interested in research opportunities than part-time students. This suggests that universities attempting to promote a part-time program should not place emphasis on research opportunities offered by the program. Part-time students are driven largely by the desire for higher pay, the desire to progress in their field, and the pursuit of knowledge. In order to attract these students, universities should focus on ways in which their master's program directly relates to the industry. This study suggests an overall mindset difference between the two groups. Full-time students are driven largely by the pursuit of passion. Part-time students showcase a much more utilitarian view and desire advancement and knowledge.

Introduction

The master's program experience differs widely for full-time and part-time students. The time commitments and monetary earnings for these two groups are likely to look very different. Full-time students spend a significant portion of their day on campus, whether it be in a research lab or in a classroom. Part-time students spend significantly fewer hours on campus. In fact, many choose online programs and do not step foot on their campus whatsoever. How these students make the life-altering decision to attend graduate school has been examined in a previous paper based on the same research study [1]. The goal of this paper is to examine what drives these two student populations to pick one form of instruction over the other. This study focuses specifically on engineering master's students. There are a great number of considerations when one explores the option of a master's degree. Obviously, these engineering student populations have two very different sets of priorities, as they have chosen two different program experiences. This paper sheds light on the weight and importance of various considerations in the decision making process for full-time versus part-time students.

Background/Literature Review

Full Vs Part-time

A great deal of literature exists which examines part-time or full-time students. Many focus on the experience of these students while in their respective programs. One such study focuses on the differences in the experience in part-time, full-time, and executive MBA programs as well as the value these populations found in their degrees [2]. Others focused more heavily on part-time students and how their experiences and concerns varied from those of traditional full-time students. They reference the struggles associated with the part-time model and how these impact students throughout the program [3], [4], [5]. The effects of working while in school on student performance of both full and part-time students have also been noted [6].

Overall degree satisfaction and completion has been examined through the lens of full and part-time studenthood as well [7], [8]. Many differences and similarities between these two populations in various levels of education have been noted, but these studies all focus more specifically on the experience while actually in their respective programs. This paper aims to examine other facets of the full-time and part-time student experience by exploring the ways in which their decision to attend graduate school may differ from one another. It will provide insight into which factors matter most to these two different groups before they even begin their student experience.

Decision Making Process

The decision to pursue a graduate degree has been studied by many researchers. Certain articles focus on providing advice or instruction on how to navigate this difficult decision [9], [10]. Others focus more specifically on the undergraduate experience and how that may impact students' future decision to pursue a master's degree [11], [12]. Many previous studies focus on characteristics of the students which may influence their decision making process. Researchers have noted differences in the decision making process of students from various socioeconomic backgrounds [13]. Race and sex also impact the decision making process of prospective graduate students [14], [15]. Additionally, research suggests that individuals who accrue higher levels of debt are less likely to pursue a master's degree [16]. Differences have also been noted in individuals of different achievement levels [17]. This paper will further examine how various characteristics and factors impact the decision making process differently for the part-time and full-time student populations.

Overall Project Scope and Context of Current Work

This paper is part of a much larger effort spearheaded by Dr. Diane Peters and Dr. Elizabeth Gross to understand all aspects of the graduate student experience; much of the literature resulting from this project revolves around returners and direct pathway master's students. These two groups are characterized by length of time out of undergraduate studies before attending graduate school. Direct pathway students are characterized as those who complete a joint bachelor-master degree or attend graduate school less than five years after their bachelor degree has been completed. Returners are those students who spend five or more years in industry before returning to graduate school. Initial research conducted by the team discussed the reasons why STEM professionals decide to pursue graduate degrees [18], [19].The preceding works honed in on engineering students, exploring characteristics such as confidence [20] and self-efficacy [21] levels of direct pathway and returner students. The latest in this line of work was an

examination of the decision to pursue a master's degree and how that decision-making process differed between returner and direct pathway students [1]. While data analysis was performed for that paper, it was noted that part-time versus full-time status was a more likely cause for certain observed differences than direct pathway versus returner status. Thus, the data was reexamined for this study through the new lens of part-time versus full-time status.

Methodology

Participants

The data for this study was collected via an online survey and is part of a much larger dataset. The original intention of the data was to examine any potential differences in certain elements of the graduate school experience for direct pathway versus returner students. However, students were also asked regarding full and part-time status, which allows the data to be examined through that lens as well. The survey participants were engineering master's students in United States colleges. It was decided that only United States citizens or permanent residents would be eligible to participate in this survey in order to eliminate any potential cultural differences which may significantly impact the data. Various colleges throughout the US were contacted and propagated the survey to their eligible students via email. The demographics of the participants in the study are shown below in Figure 1.

Figure 1: Demographics of Survey Participants

Demographics	Full-time Student	Part-time student	**Total**
	2	3	**5**
American Indian or Alaska Native,White	2	3	**5**
Asian	30	13	**43**
Asian,White	6		**6**
Black or African American	7	3	**10**
Black or African American,Hispanic or Latino/a	1		**1**
Hispanic or Latino/a	5	6	**11**
Other	2	2	**4**
White	107	102	**209**
White,Hispanic or Latino/a	2	4	**6**
Total	**164**	**136**	**300**

Survey Information

The survey consisted of a number of questions regarding topics such as students' advising quality, confidence, and software abilities. This paper will focus on the section of questions regarding students' decision making process when deciding to pursue a graduate degree as well as the process for choosing a specific program. While this portion of the data was examined for differences in returner versus direct pathway students, it was noted that certain differences seemed more aligned with part versus full-time status than returner versus direct pathway status. The questions from this portion of the survey can be found in Appendix A of this paper.

Data Analysis Process

The analysis of this data was completed in a similar fashion as the previous work. First, the data was reformatted using Excel. Numerical values from 1 to 5 were assigned to the Likert scale provided to the participants, 1 being the most negative and 5 being the most positive. Blank responses were assigned a value of "null." The data was then imported into Microsoft PowerBI to calculate the average value of the responses from the two populations to each question. Finally, the Mann-Whitney Test was used via the MiniTab software to determine whether the differences in responses of the two populations were statistically significant. By comparing the p-value generated by the software to the significance level, the significance between the responses was determined. The null hypothesis for this test was that the two values were not different. If the p-value was less than the significance level, the null hypothesis was not rejected. If the p-value was greater than the significance level, the null hypothesis was rejected, and the differences were deemed significantly different.

Findings and Discussion

Participants were first asked to what degree they consulted various groups when deciding to attend graduate school. Both full-time and part-time students relied most heavily on their partners with no significant difference in the average response. The next highest average response for both groups was family. However, here, the full-time students consulted their families to a higher degree than part-time students. Full-time students also consulted their friends, current graduate students, undergraduate advisors, and prospective graduate advisors to a higher degree than part-time students. This shows that, overall, full-time students consulted more groups in general. This is likely due to the large time commitment that full-time students must undertake compared to part-time students. Part-time students are able to more easily keep working full-time hours and may not have to spend a significant amount of time on campus, unlike their full-time counterparts; the degree of impact on their overall life is less, and thus it can be expected that they will need less advice overall. The results from the first question are shown below in Table 1. The statistical significance was determined using the Mann-Whitney test as described above. The Mann-Whitney test was chosen rather than the t-test because the assumptions inherent in the t-test, particularly the assumption that data is normally distributed, were not met.

Table 1: Level to Which Others Were Consulted in Decision Making

Group	Difference	Full-time Average	Part-time Average
My partner/significant other	Not significant	3.63	3.97
My family	**Significant**	**3.47**	**2.7**
My friends	**Significant**	**2.92**	**2.31**
My professional colleagues	Not significant	2.88	2.97
Current graduate students	**Significant**	**2.46**	**1.81**

Undergraduate university academic advisors/faculty	**Significant**	**2.83**	**1.84**
Prospective graduate advisors/faculty	**Significant**	**2.56**	**1.82**

The next question was how supportive various groups were during the decision making process. The results from this question are shown below in Table 2. As one may observe from the table, both full-time and part-time students reported high support levels from all parties with no statistically significant differences. It is important to note that survivorship bias may play a role in the high average results for this question. It stands to reason that those who received ample support would choose to pursue higher education. Those who were not supported likely did not pursue a master's degree, meaning they would not be represented in this dataset at all. It is also interesting to note that, while full-time students consulted current graduate students, undergraduate advisors, and prospective graduate advisors more, both populations reported similar levels of support from these groups.

Table 2: Support Level from Others during Decision Making

Group	Difference	Full-time Average	Part-time Average
My partner/significant other	Not significant	4.76	4.75
My family	Not significant	4.68	4.66
My friends	Not significant	4.59	4.39
My professional colleagues	Not significant	4.48	4.43
Current grad students	Not significant	4.45	4.21
Undergraduate university advisors/faculty	Not significant	4.5	4.43
Prospective graduate advisors/faculty	Not significant	4.45	4.37
Other	Not significant	3.83	4.33

Table 2 shows that both part-time and full-time students utilized support from similar individuals in their sphere. Participants were asked how important a number of factors were to their decision making process. As shown below in Table 3, several differences were noted between the two populations. Full-time students were more affected by family influence, which is likely due to the larger time commitment full-time status requires. Full-time students also desired to pursue a passion to a higher degree than part-time students. This trend of a more utilitarian outlook from part-time students continues throughout the question. They had less of a desire to help others, make new discoveries in their field, and to conduct research than full-time students. Part-time students did, however, desire more knowledge and career advancement equally to their full-time

counterparts. They desired higher pay more than full-time students. These results showcase the fact that part-time students focus more on the usefulness of their master's degree than their passion for the field.

There are other characteristics worth noting as well. While higher pay was a significant driving factor for part-time students especially, poor economy/lack of available jobs was not. This could be in part due to the state of the economy at the time the survey was conducted. If the job market was not perilous at the time, this factor may not have been on the minds of the participants. A significant difference was noted in the opportunity to apply undergraduate work to master's requirements as well. This difference may actually be more aptly attributed to returner versus direct pathway status than by full versus part-time. If one has been out of college for a significant amount of time, they would not be able to apply their undergraduate work to a graduate degree. Again, the statistical significance between full-and part-time students' responses is shown in Table 3.

Table 3: Importance of Factors in Decision to Pursue a Master's Degree

Factor	Difference	Full-time Average	Part-time Average
Family Influence	**Significant**	**3.05**	**2.71**
A sense of personal achievement	Not significant	4.24	4.27
A desire for more knowledge in my field of study	Not significant	4.5	4.43
A desire to pursue a passion	**Significant**	**4.14**	**3.74**
A lack of something better to do	Not significant	2.18	2.01
A desire to make new discoveries in the field	**Significant**	**3.17**	**2.43**
A desire for higher pay	**Significant**	**3.66**	**4.04**
A desire to teach	Not significant	2.24	2.15
A desire to help others	**Significant**	**3.53**	**3.07**
The lifestyle of an engineer	Not significant	2.93	2.77
A desire to conduct research	**Significant**	**2.73**	**2.13**
Poor economy/lack of available jobs	Not significant	2.02	1.86
A desire to change careers	Not significant	2.48	2.47
A desire to advance in my career	Not significant	4.29	4.52
To obtain a credential	Not significant	3.43	3.58
The high regard in which engineers are held	Not significant	3.07	3
The opportunity for me to apply undergraduate work to my Master's requirements	**Significant**	**2.67**	**2.15**

Other	Not significant	2.1	1.27

When asked which strategies they used to increase their likelihood of acceptance, full-time students reported working with a professor to gain research experience to a higher level than part-time students. As noted in previous questions, full-time students had a much greater interest in research then part-time students, so this result aligns with previous data. Full-time students also networked and built relationships to a higher level as well. As seen previously, full-time students consulted other parties regarding the decision making process to a much higher degree than part-time students. It follows, then, that full-time students would network to a higher level.

The two populations also differ in their use of achievements in undergraduate courses. This difference again seems more likely attributed to direct pathway or returner status than full-time or part-time status. Students who have not been in college recently are less likely to use undergraduate achievements to gain acceptance. The strategies that were statistically significant from this portion of the survey are shown below in Table 4.

Table 4: Strategies Used to Increase Likelihood of Acceptance

Item	Difference	Full-time Average	Part-Time Average
Working with a professor to gain research experience	**Significant**	**2.81**	**1.71**
Networking/relation-ship building	**Significant**	**3.23**	**2.49**
Achievement in undergraduate courses	**Significant**	**4.07**	**3.51**
Courses as a non-degree student	Not significant	1.68	1.95
Other	Not significant	1.96	1.87

When asked which sources of information were used to select their specific master's program, full-time students cited using to a higher degree professors from their previous institution, professors from the master's degree institution being considered, and current master's students. Throughout this study, there was a tendency of full-time students to network and communicate with others to a higher degree than part-time students. These results further support this idea. However, it is notable that part-time students actually used professional colleagues as a source of information more than full-time students. This difference could be attributed to the utilitarian outlook of part-time students observed in previous questions. They could be seeking information as to which universities are best regarded within their company or which would work best with their work schedule. They are also more likely to communicate with work colleagues because part-time students do not necessarily need to quit their job in order to pursue their degree. Full-time students may hesitate to discuss graduate school with colleagues because they will have to lessen their work hours in order to pursue that course of study. The results of this question are shown below in Table 5. Statistically significant differences are bolded.

Table 5: Sources Used to Select Master's Program

Item	Difference	Full-time Average	Part-time Average
University websites	Not significant	3.97	4.17
Online or printed guides to graduate schools (e.g., Peterson's guide to Graduate Schools)	Not significant	2.29	2.44
Professors from my previous institution	**Significant**	**2.7**	**1.76**
Professors from the Master's degree institutions I was considering	**Significant**	**2.77**	**1.92**
Professional colleagues	**Significant**	**2.25**	**2.63**
Current master's students	**Significant**	**2.29**	**1.72**
Others who have achieved their Master's degrees	Not significant	2.29	2.2
Other	Not significant	1.67	1.68

The participants were next asked which persons were an important factor when choosing their specific master's program. The results of this question are shown below in Table 6. Full-time students were more concerned about the funding available to them than part-time. This is likely due to the fact that full-time students will not have as much time to pursue a job outside of their studies. They may hope to gain research stipends or assistantships to make up for some of their lost income. Full-time students also were more concerned about medical benefits than part-time students, though the average values were relatively low for both populations. This again can be attributed to the fact that full-time students are less likely to have full-time employment, although it is possible that they may have benefits through a spouse or partner's employment. It is also possible that many of the part-time students anticipated receiving financial support from their employer in order to pay for their graduate degree, thus relieving them of any financial concerns during their graduate education.

As observed previously, full-time students are far more interested in research than part-time. Because of this, research opportunities were more important to them. Similarly, they also desired a thesis program whereas part-time students did not. It is possible that those part-time students who are interested in research have already started to pursue these opportunities in their jobs, or anticipate the ability to do so once they have a graduate degree; with opportunities to conduct research at their job, those who are interested in it may feel that they do not need that experience as part of their master's program. This is a topic for future work, in order to understand whether part-time students are simply not pursuing research-focused careers, or whether their interest in conducting research is satisfied elsewhere. Full-time students also found information about specific professors to be more important. This could be tied to their interest in research as well

because they may desire to pursue opportunities with professors who interest them. They are also more likely to be in the classroom face-to-face with their professors, so they want to ensure they will enjoy them. The amount of time needed to obtain a degree also mattered more to full-time students. While this difference may initially not seem intuitive, it is likely due to the fact that full-time students are making a far greater economic sacrifice to obtain their degree, and they need to finish quickly to begin making money. Part-time students understand that it will take them a substantial amount of time to complete their degree anyway, and they are likely to continue working throughout it. This makes the need to complete the degree quickly less dire. They also may consider the possible need to take a break for a term or two during the program, due to demands of work or family needs.

Information about the specific location of the program, such as the surrounding area, proximity to family, and the university culture was more important to full-time students. This is, of course, intuitive because full-time students will spend more time on campus and in that area with their peers than part-time students. Information about the graduate student culture and makeup was more important to full-time students, likely for similar reasons. One interesting result to note is that the proximity to work was not more important to either populations. This could have multiple explanations. Firstly, according to the data, part-time students are far more interested in online classes [22] If their classes are online, proximity to work does not matter to them. Also, it can be assumed that full-time students often quit their jobs or postpone entering the workforce to pursue their degree. This means that they do not have to be concerned with proximity to work either, although they may need to address the so-called “two-body problem” if they have a partner who is employed.

The last notable difference from this data is that full-time students prefer day classes whereas part-time students prefer night classes. However, the average response of part-time students for evening classes is still very low. This is likely due to the fact that they prefer online classes by a significant margin. Online courses are often asynchronous, which means the time of the class would not matter. Even if the classes are synchronous, it is fairly easy for a part-time student to attend a virtual lecture during a lunch hour, and synchronous online lectures may also be recorded at times.

Table 6: Importance of Factors When Choosing a Specific Master’s Program

Item	Difference	Full-time Average	Part-time Average
Funding	**Significant**	**3.5**	**3.07**
Tuition Costs	Not significant	3.48	3.63
Medical benefits	**Significant**	**1.81**	**1.19**
Academic Programs/Disciplines offered	Not significant	4.4	4.34
Research opportunities	**Significant**	**3.42**	**1.9**
Course requirements	Not significant	3.52	3.55
Admissions exam requirements	Not significant	2.67	2.93

Program required a thesis	**Significant**	**2.51**	**1.79**
Non-thesis program	**Significant**	**2.47**	**3.67**
Required time at institution to complete degree requirements	**Significant**	**3.12**	**3.02**
Master's level credit for undergraduate or other work	Not significant	2.05	1.91
Estimated time to degree	**Significant**	**3.48**	**3.1**
Online option for courses	**Significant**	**1.84**	**4.52**
Information about specific professors	**Significant**	**2.83**	**2.36**
Information about the culture/makeup of the graduate student population	**Significant**	**2.56**	**1.82**
Childcare options	Not significant	1.15	1.11
Admissions requirements	Not significant	3.13	3.23
Part-time options	**Significant**	**1.65**	**4.11**
The surrounding town or city	**Significant**	**3.24**	**1.99**
University culture	**Significant**	**3.36**	**2.1**
Proximity to work	Not significant unless adjusted for ties	1.88	2.3
Proximity to family	**Significant**	**2.53**	**1.94**
Ability to accommodate partner needs	Not significant	1.9	1.97
Classes offered during the day	**Significant**	**2.36**	**1.69**
Classes offered during the evening	**Significant**	**1.73**	**2.75**
Other	Not significant	1.67	2.4

Finally, participants were asked how much the factors listed in Table 7 influenced their belief in their ability to succeed in their master's program. There are no significant differences noted in this portion of the survey. The results are shown below in Table 7, below. This aligns with previous analyses carried out in this project, which showed that there were no statistically significant differences in confidence between returners and direct pathway students [21]; as noted, returners were more likely than direct pathway students to opt for part-time study, and the same considerations regarding confidence likely apply here as well.

Table 7: Factors Influencing Ability to Succeed in Master's Program

Item	Difference	Full-time Average	Part-time Average
Socioeconomic status	Not Significant	3.59	3.74
Family status (no children or small children)	Not significant	3.98	3.84
Your age	Not significant	3.84	3.76
Your gender	Not significant unless adjusted for ties	3.44	3.23
Your race	Not significant	3.34	3.21
Your sexual orientation	Not significant	3.2	3.13
Disability status	Not significant	3.24	3.14
Religion	Not significant	3.16	3.06
Other	Not significant	2.91	3.14

Implications

Many significant differences were noted between the part-time and full-time engineering student populations. Though some of these differences may seem intuitive, they provide a more concrete understanding of the mindset of these two groups, as well as suggest additional research questions. This research also has implications that may help universities to better tailor their marketing to attract the right students to the right programs.

Research Opportunities

As evidenced by the data throughout this study, full-time students are more interested in research opportunities than part-time students. It seems, then, that marketing for full-time programs should include information about the various research opportunities available to the students. From the survey, it was shown that full-time students place more emphasis on specific professors. University websites may consider including research opportunities with or previous projects completed by their various engineering master's faculty members on their website and promotional materials for full-time master's programs. Additionally, if a student suggests to their advisor that they are very interested in research going forward, the advisor may point them toward a full-time rather than part-time master's degree pursuit.

Utilitarian Outlook of Part-time Students

Also noted in the data was the rather utilitarian mindset of part-time students. They were more concerned with the obtaining of knowledge, career advancement, and higher pay than they were with the pursuit of a passion. Universities with part-time engineering master's programs may consider removing "fluff" from their part-time promotional materials. They should instead focus on showcasing how their master's program directly relates to the industry. They may also highlight any data they may have which shows that their master's students have higher earnings than either students with only a bachelor's degree or than master's students from other universities.

Conclusions and Future Work

This study yielded a number of differences between full-time and part-time students with regards to the decision-making process. It also offered a deeper understanding of the mindsets of these two groups. Full-time students are pursuing master's degrees largely due to their passion for the subject. Part-time students are much more practically driven. The results of this study may be used by universities in both marketing and advising to help students find their proper place.

This study did imply a need for further research into the causal factors driving certain results. For example, it was found that full-time students to be more likely to consult with current master's students than part-time students. However, this result may actually be driven by direct pathway status rather than full-time status. Direct pathway students are likely to have more access to master's students when making their decision because they are less removed from their undergraduate degree. This may also be true for the result which showed that full-time students are more likely to rely on their undergraduate achievements to gain acceptance. In order to understand the true causation, more research is required.

Future work should also examine more deeply the demographic factors of which students opt for part-time versus full-time master's degrees. The study population here did not have sufficient numbers of participants who were under-represented within engineering to perform any meaningful statistical analysis; subsequent studies, focused specifically on this question, could intentionally recruit participants in order to study these aspects and draw meaningful conclusions. Furthermore, as this information is considered by experts in educational marketing and policy, the impact of making changes like those recommended in the Implications section of this paper should be studied. Such studies should be done by experts in marketing and policy, in order to ensure that their conclusions are sound and supported by evidence.

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References

[1] A. G. Wanless, D. L. Peters, and E. A. Gross, "Returning and direct pathway students: How the decision-making process of engineering master's degree pursuit is influenced by industry experience," in *Proc. 2023 ASEE Annu. Conf. Expo.*, Baltimore, MD, 2023.

[2] G. D. Bruce, "Exploring the value of MBA degrees: Students' experiences in full-time, part-time, and executive MBA programs," *J. Educ. Bus.*, vol. 85, no. 1, pp. 38–44, 2009, doi: 10.1080/08832320903217648.

[3] S. K. Gardner and B. Gopaul, "The part-time doctoral student experience," *Int. J. Doctoral Stud.*, vol. 7, pp. 63, 2012.

[4] M. A. Cohen and S. Greenberg, "The struggle to succeed: Factors associated with the persistence of part-time adult students seeking a master's degree," *Contin. Higher Educ. Rev.*, vol. 75, pp. 101–112, 2011.

[5] J. C. Yum, D. Kember, and I. Siaw, "Coping mechanisms of part-time students," *Int. J. Lifelong Educ.*, vol. 24, no. 4, pp. 303–317, 2005.

[6] R. Darolia, "Working (and studying) day and night: Heterogeneous effects of working on the academic performance of full-time and part-time students," *Econ. Educ. Rev.*, vol. 38, pp. 38–50, 2014.

[7] A. I. Moro-Egido and J. Panades, "An analysis of student satisfaction: Full-time vs. part-time students," *Soc. Indic. Res.*, vol. 96, pp. 363–378, 2010.

[8] R. Neumann and J. Rodwell, "The 'invisible' part-time research students: A case study of satisfaction and completion," *Stud. Higher Educ.*, vol. 34, no. 1, pp. 55–68, 2009, doi: 10.1080/03075070802601960.

[9] A. Madler, "Is grad school right for me?," in *Careers in Food Science: From Undergraduate to Professional*, Cham: Springer Int. Publishing, 2022, pp. 363–373.

[10] J. Loudis, B. Blagojevic, A. Rodman, and J. A. Peetz, Eds., *Should I Go to Grad School?: 41 Answers to an Impossible Question.* Bloomsbury Publishing USA, 2014.

[11] M. Borrego et al., "Pursuing graduate study: Factors underlying undergraduate engineering students' decisions," *J. Eng. Educ.*, vol. 107, no. 1, pp. 140–163, Jan. 2018.

[12] E. Crede and M. Borrego, "Undergraduate engineering student perceptions of graduate school and the decision to enroll," in *Proc. 2011 ASEE Annu. Conf. Expo.*, Vancouver, BC, June 2011. doi: 10.18260/1-2--18484.

[13] S. Cho-Baker et al., "Factors considered in graduate school decision-making: Implications for graduate school application and acceptance," *ETS Res. Rep. Ser*. doi: 10.1002/ets2.12348.

[14] L. W. Perna, "Understanding the decision to enroll in graduate school: Sex and racial/ethnic group differences," *J. Higher Educ.*, vol. 75, no. 5, pp. 487, 2004.

[15] M. C. Poock and P. G. Love, "Factors influencing the program choice of doctoral students in higher education administration," *NASPA J.*, vol. 38, no. 2, pp. 203–223, 2001, doi: 10.2202/1949-6605.1136.

[16] W. C. Weiler, "Expectations, undergraduate debt and the decision to attend graduate school: A simultaneous model of student choice," *Econ. Educ. Rev.*, vol. 13, no. 1, pp. 29–41, 1994.

[17] A. L. Mullen et al., “Who goes to graduate school? Social and academic correlates of educational continuation after college,” *Sociol. Educ*., vol. 76, no. 2, pp. 143–169, 2003, doi: 10.2307/3090274.
[18] D. L. Peters and S. R. Daly, “Why do professionals return to school for graduate degrees?” in *Proc. ASEE Annu. Conf. Expo.* San Antonio, Texas, June 10-13, 2012.
[19] D. L. Peters and S. R. Daly, “Returning to graduate school: Expectations of success, values of the degree, and managing the costs,” *J. Eng. Educ*., vol. 102, no. 2, pp. 244–268, 2013.
[20] D. Peters and E. Gross, “Confidence of graduate students in engineering masters’ programs: A comparison of returners and direct-pathway students,” In *Proc. ASEE Annu. Conf. Expo 2021*, Virtual. doi: 10.18260/1-2--36835.
[21] E. A. Gross et al., “Perceived self-efficacy of master’s in engineering students regarding software proficiency and engineering acumen,” in *Proc. ASEE Annu. Conf. Expo*., June 2017, Columbus, OH, doi: 10.18260/1-2--27860.
[22] E. Gross and D. Peters, “Preferences of returners and direct pathway students for online vs. in-person master’s programs,” in *Proc. ASEE Annu. Conf. Expo*., Portland, OR, June 2024.

Appendix A

List of Questions Examined in this Paper

1. How much did you consult with each group when you were deciding to go to grad school? (Not applicable, 1 - Not at all, 2 - A little, 3 - Some, 4 - A moderate amount, 5 - A great deal)
    a. My partner/significant other
    b. My family
    c. My friends
    d. My professional colleagues
    e. Current graduate students
    f. Undergraduate university academic advisors/faculty
    g. Prospective grad advisers/faculty

2. How supportive were the people listed below in your decision? (Not applicable, 1 - Very resistant, 2 - Somewhat resistant, 3 - Neither resistant nor supportive, 4 - Somewhat supportive, 5 - Very Supportive)
    a. My partner/significant other
    b. My family
    c. My friends
    d. My professional colleagues
    e. Current graduate students
    f. Undergraduate university advisors/faculty
    g. Prospective graduate advisors/faculty
    h. Other

3. Please indicate how important each of these factors was in your decision to attend graduate school prior to enrolling (1 - Not at all important, 2 - A little important, 3 - Somewhat important, 4 - Important, 5 - Very important)
    a. Family influence
    b. A sense of personal achievement
    c. A desire for more knowledge in my field of study
    d. A desire to pursue a passion
    e. A lack of something better to do
    f. A desire to make new discoveries in the field
    g. A desire for higher pay
    h. A desire to teach
    i. A desire to help others
    j. The lifestyle of an engineer
    k. A desire to conduct research
    l. Poor economy/lack of available jobs
    m. A desire to change careers
    n. A desire to advance in my career
    o. To obtain credential
    p. The high regard in which engineers are held
    q. The opportunity for me to apply undergraduate work to my Master's requirements
    r. Other

4. Please indicate the extent to which you utilized each of the following as strategies to increase your likelihood of acceptance into a Master's program (1 - Not at all, 2 - A little, 3 - Some, 4 - A moderate amount, 5 - A great deal)
    a. Working with a professor to gain research experience
    b. Networking/Relationship building
    c. Achievement in undergraduate courses
    d. Courses as a non-degree student
    e. Other

5. Please indicate how much you used each of the following sources of information when you were selecting a Master's program (1 - Not at all, 2 - A little, 3 - A moderate amount, 4 - A lot, 5 - A great deal)
    a. University websites
    b. Online or printed guides to graduate schools
    c. Professors from my previous institution
    d. Professors from the Master's degree institutions I was considering
    e. Current Master's students
    f. Others who have achieved their Master's degrees
    g. Other

6. Please rate how important each of the following was when selecting a Master's program (1 - Not at all important, 2 - A little important, 3 - Somewhat important, 4 - Important, 5 - Very important)
    a. Funding
    b. Tuition costs
    c. Medical benefits
    d. Academic programs/disciplines offered
    e. Research opportunities
    f. Course requirements
    g. Admissions exam requirements
    h. I chose a program that required a thesis
    i. I wanted a program that did not require a thesis
    j. Required time at institution to complete degree requirements
    k. Master's level credit for undergraduate or other work
    l. Estimated time to degree
    m. Online option for courses
    n. Information about specific professors
    o. Information about the culture/makeup of the grad school population
    p. Childcare options
    q. Admissions requirements
    r. Part-time options
    s. The surrounding town or city
    t. University culture
    u. Proximity to work
    v. Proximity to family

w. Ability to accommodate partner needs
x. Classes offered during the day
y. Classes offered during the evening
z. Other

7. Indicate How Each of the Following Has Influenced Your Belief in Your Ability to Succeed in a Master's Program (1 - Very negatively, 2 - Somewhat negatively, 3 - Neither negatively nor positively, 4 - Somewhat positively, 5 - Very positively)
    a. Socioeconomic status
    b. Family Status (no children or no small children)
    c. Age
    d. Gender
    e. Race
    f. Sexual orientation
    g. Disability status
    h. Religion
    i. Other