

## **Factors Affecting College Students' Satisfaction with Major Curriculum: Evidence from Nine Years of Data**

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### **Abstract**

*This study assesses the extent to which eleven academically related factors affect the overall satisfaction with major curriculum at a midsized public University. The findings of the study support several prior studies in that each factor examined had a moderate to high positive correlation regarding satisfaction with major curriculum where  $r$  ranged between .35 and .61. Moreover, five out of the eleven factors identified in the model (quality of instruction, capstone experience, academic advising, overall college experience and preparation for career or graduate school) show a statistically significant positive impact in explaining satisfaction with major curriculum and are greater than or equal to  $\beta = .089$ . Implications of these findings and future research directions are also discussed.*

**Keywords:** College students; satisfaction; curriculum; performance.

### **Introduction**

Satisfaction is a well researched topic in both academic and non-academic (workplace) settings. In academic settings, students' satisfaction data helps colleges and universities make their curriculum more responsive to the needs of a changing marketplace (Eyck, Tews & Ballester, 2009; Witowski, 2008). In making curriculum more effective and responsive, it is important to evaluate effectiveness measures concerning the curriculum of each college, department, and program (Ratcliff, 1992; Elliott & Healy, 2001; Özgüngör, 2010; Peters, 1988; Billups, 2008; Aman, 2009). The effectiveness of a curriculum can be evaluated using direct performance measures (e.g., comprehensive exams, projects, and presentations) and by indirect performance measures (e.g., students' satisfaction with the curriculum) (Jamelske, 2009; Witowski, 2008). This study focuses on the second approach (indirect performance measures) or assessing satisfaction with the curriculum. Numerous researchers have investigated issues related to students' satisfaction (e.g., Astin, 1977; Bryant, 2009; DeShields, Kara, & Kaynak, 2005; Pascarella & Terenzini, 2005), and most of them agree that highly satisfied students are more likely to remain in, and ultimately, successfully graduate from college. Some research also reveals that student satisfaction is inversely related to student complaints regarding advising, career preparation, and the need for new courses or effectiveness of current courses (e.g., Korn, Sweetman, & Nodine, 1996).

Students' satisfaction surveys are important in ascertaining whether colleges and universities are fulfilling their mission. It is well known that the most important product of educational institutions is qualified graduates. In order to best prepare students so that they are sought after by employers upon graduation, an effective curriculum is needed. Students must understand the value of their education and be satisfied with their overall experience in order to promote and support their higher educational institution as a student and as an alumnus. Satisfaction is a relevant measure because many studies have demonstrated that other factors being equal, satisfied individuals are likely to be willing to exert more effort than unsatisfied individuals (Bryant, 2006; Özgüngör, 2010). Thus, satisfied students (with the curriculum) are likely to exert more effort in their educational studies by taking actions such as regularly attending their classes and becoming more involved in their coursework and institution.

Satisfied students are more likely to be committed and continue their studies (as measured by a higher retention rate) than unsatisfied students, who are likely to be less willing to regularly attend classes, and are more likely to quit their studies (Jamelske, 2009; Borden, 1995). Researchers have assessed students' satisfaction for many reasons: Several researchers have measured the levels of student satisfaction in order to examine accountability reporting and self-improvement purposes across departments and colleges; others have examined student satisfaction to determine if satisfaction ratings of college programs and services are associated with the satisfaction of the overall college experience. Still others have investigated student satisfaction items related to issues such as student retention and attrition.

Given the importance of student satisfaction levels at higher educational institutions, there has been a growing interest in examining factors affecting students' satisfaction. College students' satisfaction has been conceptualized in a number of ways by researchers. For example, college students' satisfaction was conceptualized as "satisfaction with college experience" (Elliott & Healy, 2001; Peters, 1988; Billups, 2008), "satisfaction with quality of instruction" (Aman, 2009), "satisfaction with advising" (Corts, Lounsbury, Saudargas, Tatum, 2000; Elliott, 2003; Olson, 2008; Peterson, Wagner, and Lamb, 2001), "satisfaction with online courses" (Banks & Faul, 2007; Heiman, 2008; Beqiri, Chase, & Bishka, 2010), "satisfaction with assessment" (Kane, 2005; Ross, Batzer, & Bennington, 2002), "satisfaction campus-wide" (Benjamin & Hollings, 1997), and "satisfaction with an academic department" (Corts et al., 2000). The above studies indicate that there is a growing body of literature on student perceptions of satisfaction. They also suggest that student satisfaction is a complex yet poorly articulated notion (DiBiase, 2004; Garcia-Aracil, 2009).

In this study, however, satisfaction is conceptualized as "satisfaction with major curriculum". Unlike prior studies, this study intends to contribute to existing literature by determining the extent to which eleven factors affect students' satisfaction with major curriculum by focusing on a large sample of senior graduating students. Despite the many studies on student satisfaction with college-related issues, there is a lack of research on students' satisfaction with major curriculum. The paper has five sections. After the introduction, section one provides a literature review of college students' satisfaction and curriculum-related issues. This is followed by the conceptual framework in which the factors affecting satisfaction with major curriculum are identified, and hypotheses are developed. The study's methodology is presented in section three, and the results of the study are analyzed and discussed in section four. Finally, theoretical and practical implications of the findings, and possible future research directions are discussed in section five.

### ***Literature Review***

Interest in factors affecting satisfaction has increased in both academic and non-academic settings. This is mainly due to the fact that satisfaction (motivation) affects both individual and organizational performance (Cranny et al., 1992; Decenzo & Robbins, 2010). In the workplace, scholars have defined satisfaction in a number of ways (e.g., Locke, 1976: 1300; Robbins & Judge, 2008: 83). The central theme across studies involves a positive feeling of one's job resulting from an evaluation of its characteristics. Satisfaction in work environment has been studied both as an independent and a dependent variable. As an *independent variable*, satisfaction explains outcomes such as performance, absenteeism, and turnover (e.g., Cranny et al., 1992; Ramayah & Nasurdin, 2006). As a *dependent variable*, satisfaction is explained by factors such as salary, benefits, and recognition (Ramayah & Nasurdin, 2006; Tessema, Ready and Embaye, 2011). In academic settings, satisfaction has been defined as the extent to which students are satisfied with a number of college-related issues such as advising, quality of instruction, course availability, and class size.

According to Elliott and Healy (2001), student satisfaction is a short-term attitude based on an evaluation of their experience with the education service supplied. Just like in the workplace, satisfaction in academic settings is also treated as both an independent and dependent variable. For instance, satisfaction, as an *independent variable*, explains college outcomes such as GPA, retention rates, and graduation rates (Jamelske, 2009; Borden, 1995; Noel, 1978; Pascarella & Terenzini, 2005). As a *dependent variable*, satisfaction is explained by a number of academic-related factors such as advising, quality of instruction, and class size (Corts et al., 2000; Elliott, 2003; Peterson, et al., 2001). Several researchers have identified and empirically tested factors affecting or that are correlated with students' satisfaction. Since students' satisfaction has been conceptualized in a variety of ways by researchers, several factors have been examined that affect college students' satisfaction.

For instance, Corts et al. (2000) identified five factors affecting satisfaction with an academic department, and Elliott and Healy (2001) identified eleven factors affecting students' satisfaction with educational experience. In this study, students' satisfaction is examined as a *dependent variable* being affected by eleven academic related factors, namely required course availability for major, quality of instruction, major course content, variety of courses, capstone experiences, academic advising, overall college experience, preparation for career or graduate school, class size of major courses, grading in major courses, and course availability of electives in major. A diagram depicting the factors affecting satisfaction with major curriculum is shown in Model 1.

**Model 1: Factors affecting satisfaction with major curriculum**  
(Refer to the back pages)

In our study, *course availability* refers to the extent to which required courses are available to students completing their major. Undergraduate colleges and universities provide several course offerings for their students. These courses are grouped under different categories, such as university-wide requirements, college core courses, required courses for major, electives in major, etc. It could be argued that the more options/choices in the above categories students have, the more likely they will feel satisfied with the curriculum. This is because availability of choice results in flexibility, which in turn affects individual's satisfaction levels. Seaberry (2008) found that scheduling flexibility was a major factor for students' satisfaction. Based on the above finding, the following two hypotheses are proposed:

**Hypothesis 1a:** Satisfaction with required course availability in major is positively correlated with overall satisfaction with major curriculum.

**Hypothesis 1b:** Satisfaction with course availability for electives in major is positively correlated with overall satisfaction with major curriculum.

*Quality of instruction* refers to the degree to which students perceive the mode of instruction to be of high quality. If students believe there is high quality of instruction, they are more likely to feel satisfied (Aman, 2009; Sampson, Leonard, Ballenger, Coleman, 2010; Broder and Dorfman, 1994). Thus, the following hypothesis is proposed:

**Hypothesis 1c:** Satisfaction with quality of instruction is positively correlated with overall satisfaction with major curriculum.

*Major course content* refers to student perceptions that courses in their major have relevant content. Parayitam (2007) surmised that students' perceptions of course content set by the instructor were positively related to both effectiveness and satisfaction. Instructional assessments and knowledge-based measures such as the Major Field Achievement Test indicate the degree to which faculty provide the appropriate subject matter and promote student understanding of the material (Norcross, Gerrity, & Hogan, 1993). In addition, Dahlgren, Hult, Dahlgren, Segerstad, and Johansson (2006) suggest that both the content of an academic major and the sociocultural context in which it is taught influence not only what the student learns, but also their satisfaction. Based on the above studies, the following is proposed:

**Hypothesis 1d:** Satisfaction with major course content is positively correlated with overall satisfaction with major curriculum.

*Variety of courses in major* refers to students' perception that the curriculum at their institution provides a variety of courses in their major. Variety of courses has been identified as a predictor in student satisfaction (Corts et al., 2000). If there is variety of courses, students are more likely to have broader skills and knowledge, which in turn affects their satisfaction level with the curriculum. Hence, the following hypothesis is proposed.

**Hypothesis 1e:** Satisfaction with variety of courses is positively correlated with overall satisfaction with major curriculum.

*Capstone experiences* refers to the degree to which students are provided an opportunity to integrate, synthesize, and reflect on what has been learned across a course of study. The capstone experience occurs toward the conclusion of a course of study, generally in the last three semesters. It may place the undergraduate experience in a broad context that can be applied to students' post-college lives (Hurtig & Estell, 2009). It could be argued that if students are satisfied with their capstone experience, they are more likely to be satisfied with the curriculum. Thus, the following hypothesis is proposed:

**Hypothesis 1f:** Satisfaction with capstone experiences is positively correlated with overall satisfaction with major curriculum.

**Academic advising** refers to the extent to which students are satisfied with academic advising, including accessibility of faculty, and the quality of the interaction with their advisor. Close relationships with faculty, especially as part of the advising process, are instrumental in students feeling connected to their institution (Corts et al., 2000; Russell & Lehman, 2008; Gordon, 2005). Satisfaction with a student's first-year experience was partially related to a student's connection to their advisor or to a key faculty member (Noel, 1978). Students, who received effective, meaningful academic advising, felt more satisfied (Noel, 1978). Further, Peterson, Wagner, and Lamb (2001) found that effective academic advising played a role in a student's positive perceptions of the institution. Elliott (2003) highlighted the role of faculty accessibility in increasing student satisfaction and positive feelings about the college. Based on the above findings, the following hypothesis is proposed:

**Hypothesis 1g:** Satisfaction with academic advising is positively correlated with overall satisfaction with major curriculum.

**Overall college experience** refers to the extent to which student expectations are met relative to overall college experience. Elliott and Healy (2001) identified a number of dimensions which contribute to student satisfaction. Peters (1988) and Billups (2008) found that campus life, outside the classroom, was just as important to student's satisfaction as educational experience. One of the key areas contributing to student satisfaction was student's identification and integration with the campus community (Bean & Vesper, 1994). Based on the above research findings, the following hypothesis is proposed:

**Hypothesis 1h:** Satisfaction with overall college experience is positively correlated with overall satisfaction with major curriculum.

**Preparation for career or graduate school** refers to the extent to which students perceive they are well prepared for career and graduate school by faculty and their college. One of the goals of undergraduate programs is to prepare students for careers in their chosen discipline or for graduate school (Corts et al., 2000; Gordon, 2005). This suggests that the more students perceive that they are prepared for career positions or graduate school, the more likely they are to be satisfied. Students who were able to make the connection between their program of study and career goals felt more positive about their institution (Noel, 1978). Further, Lamport's (1993) study indicates that faculty were found to serve as important socializing agents for students by helping them adjust to college life and providing support in achieving their intellectual and personal goals. Prior studies indicated that when students get advice with regard to preparation for career or graduate school, they are more likely to be satisfied (Corts et al., 2000). Thus, the following hypothesis is proposed:

**Hypothesis 1i:** Satisfaction with preparation for career or grad school is positively correlated with overall satisfaction with major curriculum.

**Class size of major courses** refers to the extent to which class size is perceived by students to be conducive to learning. Generally speaking, students having smaller class sizes would likely be more satisfied with their college or curriculum (due to an increased amount of attention and interaction with faculty and other students) (Peterson, Wagner, and Lamb, 2001). Elliott and Healy's (2001) study supports previous findings that class size impacts students' satisfaction. Hence, the following hypothesis is proposed:

**Hypothesis 1j:** Satisfaction with class size of major courses is positively correlated with overall satisfaction with major curriculum.

**Grading in major courses** refers to the extent to which students perceive that grading in their major courses is fair. The more the grading system is perceived to be fair or the more students earn the grade that they expect, the more likely they are to feel satisfied. Parayitam (2007) indicates that perception of fairness of the instructor's grading procedures is related to students' satisfaction. Assessment has been found to be a significant factor in overall student satisfaction in a number of studies (Kane, 2005; Ross, Batzer, & Bennington, 2002; Sampson, Leonard, Ballenger, Coleman, 2010). Based on the above findings, the following hypothesis is proposed:

**Hypothesis 1k:** Satisfaction with grading in major courses is positively correlated with overall satisfaction with major curriculum.

A number of studies have been conducted to examine the effect of gender on students' satisfaction; many studies have concluded that gender has a significant influence on student's satisfaction (LPC, 2009; Moro-Egido and Panades, 2010; Perry, Sekelsy and Skarsten, 2003; Renzi et al., 1993; Sax & Harper, 2005; Umbach & Porter, 2002). Based on the above research, the following hypothesis is proposed:

**Hypothesis 2:** There is a significant gender difference in overall satisfaction with major curriculum.

## **Research Methodology**

### ***Sampling procedure***

The data used in this study were based on a survey of university students regarding their satisfaction with major curriculum; the survey was conducted over a nine year period (2001-2009) at a mid-sized Midwestern U.S. university. To collect the data, the university conducted an electronic survey (through its Institutional Planning, Assessment and Research Office) annually each spring. The survey was sent to all senior students having 90 or more credits hours.

The survey included 11 factors affecting overall satisfaction with major curriculum. The factors were: (1) required course availability for major, (2) quality of instruction, (3) major course content, (4) variety of courses, (5) capstone experiences, (6) academic advising, (7) overall college experience, (8) preparation for career or graduate school, (9) class size of major courses, (10) grading in major courses, and (11) course availability for electives in major.

### ***Sample size***

The satisfaction with major curriculum data set had 6,602 respondents during the 2001-2009 period. Overall, the response rates ranged from 23-57% over the course of the nine-year period (Table-1). However, only 5223 usable respondents or observations were obtained. Table 1 reports a selective profile of the sample including response rates. Approximately 30% of the respondents were male, and 70% were female. (University-wide, about 40% of the respondents were male and about 60% were female). Response rates ranged from 25% to 59% for female respondents and between 18% and 45% for male respondents during the survey period (2001-2009). Almost 20% of the respondents completed the survey in 2009, which is much higher than previous years. Moreover, the student response rate was the highest in 2006 (response rate 57%) and the lowest in 2001 (response rate 23%) as shown in Table 1. Table 1 also shows that the data used in this study was collected from the five colleges of the university, namely Business (20.6%), Education (15.2%), Liberal Arts (28.7%), Nursing/Health Sciences (20.9%), and Science/Engineering (14.6%). An analysis of the respondents show that response rates in the College of Business ranged between 22.5% and 60%, in the College of Education ranged between 23% and 53%, in the College of Liberal Arts ranged between 21% and 52%, in the College of Nursing/Health Sciences ranged between 14% and 76%, and in the College of Science/Engineering ranged between 18% and 61% over the course of the survey (2001-2009) (Table 1). Generally speaking, it could be said that the universe (U) profile somewhat mirrored the respondent population (R) for key demographics (gender and college) during the nine survey years (2001-2009).

### ***Instrumentation/Questionnaire***

In assessing students' satisfaction with 11 factors affecting students' satisfaction with major curriculum, a four-point Likert scale ranging from 1, "Very dissatisfied," to 4, "Very satisfied" was used (e.g., "How satisfied are you with the required course availability for major," ("How satisfied are you with the major course content," "How satisfied are you with variety of courses," "Overall, how satisfied are you with the major curriculum"). This is a forced choice method since the middle option, "Neither satisfied nor dissatisfied", was not available. It is a bipolar scaling method, measuring either positive or negative responses to a statement. In addition, the survey included items related to respondents' demographics, such as gender, college, and year in which the survey was completed.

## **Table 1: Selected Profile of Sample**

*(Refer to the back pages)*

### **Findings**

In this section, the results of the analysis are presented. First, we provide a discussion of the correlation matrix that shows the relationship between the 11 factors in our model.

Next, we examine the effect of gender on satisfaction with major curriculum, and, finally, we provide the results of the regression analysis that demonstrates the importance of the 11 factors to satisfaction with major curriculum. Table 2 presents means, standard deviations, and correlations of the factors included in the model. The mean satisfaction level of the 11 factors impacting satisfaction with major curriculum ranged between 2.94 and 3.44 on a four-point scale. The findings show that the vast majority of the respondents were satisfied with the proposed factors. A closer examination of the findings indicated that, while satisfaction with course availability for electives in major ( $M=2.94$ ,  $SD=.79$ ) and academic advising ( $M=2.97$ ,  $SD=.84$ ) ranked the lowest, satisfaction with class size of major courses ( $M=3.44$ ,  $SD=.59$ ) was ranked the highest by students over the nine-year period.

**Table 2: Statistical description and correlation matrix**

*(Refer to the back pages)*

Table 2 depicts a correlation matrix that shows the relationship between each of the factors and overall satisfaction with major curriculum. As shown, the proposed 11 factors are positively correlated with satisfaction with major curriculum. Each factor has a moderate to high positive correlation with overall satisfaction with major curriculum;  $r$  ranges between .35 and .61 (Cohen, 1988). While the highest correlation with satisfaction with major curriculum is with preparation for career or graduate school,  $r=.61$ ,  $p$  [is less than] .05, the weakest relationships with overall satisfaction with major curriculum are with required course availability and course availability for electives, both with an  $r = .35$ ,  $p$  [is less than] .005 (Table 2). Table 2 also contains the results of the calculations of the alpha coefficients provided to check the reliability of the variables. The alpha reliability score is .82 ( $\alpha =.83$ ), which can generally be considered satisfactory (Henson, 2001). The results in Table 2 support hypotheses 1a through 1k.

**Table 3: Effect of Gender on Satisfaction with Major Curriculum (T-test and Cohen's d effect size)**

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Table 3 reveals that both males and females are satisfied with the major curriculum. The average satisfaction for females was 3.14 on a four-point scale and for males it was 3.10 on a four-point scale. Moreover, t-test results show that gender has a significant effect on satisfaction ( $t_{5205}=-2.31$ ,  $p<.05$ ). Cohen's  $d$  effect size, however, indicates that the size of the effect is small (Cohen's  $d$  effect size=0.08); below 0.2 is considered a small effect. The finding in Table 3 supports Hypothesis 2.

**Table 4: Results of Regression Analyses on Satisfaction with Major Curriculum<sup>a</sup>**

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Table 4 shows the results of the regression analysis, which demonstrates the extent to which the 11 factors explain satisfaction with the major curriculum. Five out of the eleven factors identified in the model show a statistically significant positive impact in explaining satisfaction with the major curriculum and are greater than or equal to  $\beta=.089$ . The five significant factors include preparation for career or graduate school, academic advising, satisfaction with capstone experience, quality of instruction, and overall college experience. In addition, the 11 factors together explain about 58 percent of the variance in satisfaction with major curriculum ( $R^2=.58$ ).

**Discussion**

This paper intends to assess the extent to which satisfaction with the proposed 11 factors are correlated with satisfaction with major curriculum as well as the extent to which the 11 factors explain the change in overall satisfaction with major curriculum. One interesting finding in this study is that each factor examined had a moderate to high positive correlation with the other factors and overall satisfaction with major curriculum (Table 2). In other words, the 11 factors (predictor variables) are found to be significantly correlated with satisfaction with major curriculum and support the first eleven hypotheses in the study. Further, the findings support most previous studies (e.g., Corts et al., 2000; Eyck et al. 2009; Jamelske, 2009; Witowski, 2008).

Another important finding (from Table 4) is that five of the eleven factors identified in the model (preparation for career or graduate school, academic advising, capstone experience, quality of instruction, and overall college experience) are significant in explaining satisfaction with major curriculum and are greater than or equal to  $\beta=.089$ . In addition, the 11 factors together explain about 58% of the variance in satisfaction with major curriculum ( $R^2=.58$ ); this suggests that if colleges and universities are to improve student satisfaction with major curriculum, they should focus on the 11 factors identified.

These findings are consistent with the predicted relationships and provide support for the model. Further, our findings support previous work conducted by several researchers (e.g. Corts et al., 2000; Elliott and Healy, 2001; DeShields et al., 2005; Pascarella & Terenzini, 2005; Peters, 1988; Tinto, 1987). Although satisfaction with preparation for career and graduate school and academic advising are highly correlated with overall satisfaction with major curriculum ( $r=.61$  and  $r=.52$ , respectively) and were found to significantly affect the change in satisfaction with major curriculum ( $\beta=.31$  and  $\beta=.17$ , respectively), both preparation for career and graduate school ( $M=3.02$ ,  $SD=.7$ ) and academic advising ( $M=2.97$ ,  $SD=.84$ ) were rated lowest in satisfaction among the factors students examined. A number of studies have identified advising as a frequent source of dissatisfaction among students (Corts et al., 2000; Guinn & Mitchell, 1985; McAnulty, O'Connor & Sklare, 1987).

While each factor bears a significant relationship to overall satisfaction with major curriculum, preparation for career and graduate school and academic advising alone account for about 50 percent of the variance in overall satisfaction with major curriculum. Therefore, these two factors should be emphasized by colleges and departments to maintain a high level of satisfaction with major curriculum among undergraduates. Lunneborg & Wilson's (1985) study show that students may have less than adequate information on important advising topics, such as how to get into graduate school or how to build a career. McGovern and Hawks (1986) and Russell and Lehman (2008) concluded that one of the main goals of an undergraduate university is to prepare students for career or graduate school. Thus, it is reasonable to argue that among undergraduate universities (i.e., the type of university in this study) that student's satisfaction with their preparation for career or graduate school impacts students' satisfaction with major curriculum. Furthermore, Wilder (1982: 107-108) also suggests that if an institution has recruited students by promising to prepare them to successfully compete in the job market, helping students with academic and career-related needs is part of the institution's moral obligation and inherent responsibility.

Our findings also show that, although both males and females are satisfied with the major curriculum (3.10 and 3.14 on a four point scale, respectively), t-test results show that gender has a significant effect on satisfaction ( $t_{5205}=-2.31$ ,  $p<.05$ ). One of the possible explanations for the difference in satisfaction by gender could be female's value systems. That is, women are likely to be more positively lenient in their ratings than male students (Chee, Pino, & Smith, 2005) and women tend to feel more supported by faculty (both academically and personally) than do men, which largely contributes to their greater overall feeling of satisfaction in college (Sax & Harper, 2005). This study suggests that although the gender gap may have decreased among the college population, gender differences do exist in satisfaction levels across campuses.

### **Conclusions and Implications of the findings**

This study concludes that, although there are many factors that affect satisfaction with major curriculum, the proposed 11 factors were found to be important and were positively correlated with satisfaction with major curriculum. The findings from our analysis can serve as part of the planning process for universities when asked to evaluate effectiveness of their colleges, departments and programs. Universities must demonstrate effectiveness of their programs through reviews in order to receive continued financial support; this support is critical as universities and programs are increasingly under attack by states in order to curtail costs). This analysis provides universities with information on which areas to focus on for evaluation and improvement purposes in order to realize the largest gains in curriculum satisfaction levels. Further, areas that have significantly lower satisfaction levels can be further examined to determine the source of dissatisfaction and action plans for improvement can be developed. Administrators, faculty, students and review teams will want (and need) to see evidence of outcome competencies and student satisfaction levels.

Hence, given the need to determine student satisfaction with major curriculum, colleges and universities must continue conducting, analyzing, storing, and utilizing satisfaction surveys. Survey results must be shared with the relevant colleges, departments and offices and a plan of action must be undertaken to provide ongoing improvement. In this competitive market, satisfaction with services may make the difference in student selecting higher educational institutions and maintaining sufficient funding from state legislatures for public institutions. This study expands previous research in the factors affecting college student's satisfaction by focusing on major curriculum. It adds to literature on college students' satisfaction in that, unlike most prior research studies, we empirically tested the effect of 11 factors affecting satisfaction with major curriculum using a large sample size collected over nine years. Hence, our study has important theoretical and practical implications.

We conclude from our findings that knowing satisfaction levels of college students is necessary, but not sufficient. Identifying the factors and the extent to which they affect students' satisfaction with major curriculum is critical for the viability of colleges and universities.

This study indicates that satisfaction with preparation for career and graduate school and academic advising are the two factors that have the highest impact on satisfaction with major curriculum. To this end, Gordon (2005) and Olson (2008) concluded that promoting effective career development involves more than handing the student a brochure of career center workshops or explaining the on-campus interviewing process, although these resources are important and should be part of the advisor's knowledge base. Since the advisor is often the first [professional] on campus to hear a student express a career concern, he or she is a key career-related resource for the student. Faculty advisors can be valuable assets for a student's development, as faculty members are most likely to be familiar with recent changes in their discipline. This knowledge can be conveyed to benefit the student, as the academic community may be among the first to learn of developments and advances that will ultimately impact industry or employment trends. Faculty advisors may also have contacts and professional acquaintances that could be leveraged as the student begins networking and contemplating work after graduation (Olson, 2008).

Although satisfaction with curriculum cannot guarantee improved student learning outcomes and effective teaching, its absence (lower students' satisfaction) adversely impacts student learning outcomes. This suggests that while students' satisfaction plays a particularly important role in improving student learning outcomes, it should not be perceived as the only factor that affects student's performance. While this study is an important step in understanding the extent to which the proposed 11 factors are correlated with and affect satisfaction levels with major curriculum, it also leaves some questions open for future research. This study was conducted in only one U.S. mid-sized university. Hence, in order to generalize and validate the findings of this study, we suggest that a similar study be conducted in other universities, both in the U.S. and other parts of the world. That is, additional research is needed to examine the robustness of the findings and generalizations.

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**List of Tables and Figure**

**Table 1: Selected Profile of Sample**

Variables		N	%	Response rate %
Gender	M	1553	30.0	18-45
	F	3670	70.0	25-59
	<b>Total</b>	<b>5223</b>	<b>100</b>	
Year	2001	261	5.0	23
	2002	367	7.0	28
	2003	482	9.2	NA
	2004	664	12.7	55
	2005	610	11.7	50
	2006	635	12.2	57
	2007	633	12.1	52
	2008	562	10.8	47
	2009	1009	19.3	49
	<b>Total</b>	<b>5223</b>	<b>100</b>	
Colleges	Business	1078	20.6	22.5-60
	Education	793	15.2	23-53
	Liberal Arts	1498	28.7	21-52
	Nursing/Health Sciences	1094	20.9	14-76
	Science/Engineering	760	14.6	18-61
	<b>Total</b>	<b>5223</b>	<b>100</b>	

**Table 2: Statistical description and correlation matrix**

N	Variables <sup>a</sup>	M <sup>b</sup>	SD	1	2	3	4	5	6	7	8	9	10	11	12
1	Required course avail. for major	3.07	.76												
2	Course avail. for electives in major	2.94	.79	.52**											
3	Quality of instruction	3.13	.65	.34**	.338**										
4	Major course content	3.20	.60	.29**	.20**	.41**									
5	Variety of courses	3.02	.71	.46**	.56**	.45**	.50**								
6	Capstone experience	3.10	.69	.30**	.31**	.42**	.34**	.42**							
7	Academic advising	2.97	.84	.63**	.37**	.41**	.53**	.54**	.36**						
8	Overall college experience	3.27	.61	.35**	.35**	.47**	.36**	.40**	.40**	.43**					
9	Preparation for career or grad sch.	3.02	.70	.38**	.35**	.48**	.65**	.545**	.41**	.64**	.71**				
10	Class size of major courses	3.44	.59	.29**	.33**	.35**	.27**	.33**	.27**	.38**	.39**	.36**			
11	Grading in major courses	3.24	.61	.30**	.23**	.44**	.95**	.52**	.35**	.57**	.38**	.68**	.30**		
12	Over satisfaction with major curriculum	3.13	.47	.35**	.35**	.49**	.48**	.46**	.45**	.52**	.56**	.61**	.39**	.51**	

Notes: \*\*Correlation is significant at the 0.05 level (2-tailed); n=5223; <sup>b</sup>ratings are based on four-point Likert scale ranging from 1, “Very dissatisfied,” to 4, “Very satisfied;” <sup>a</sup>α =.82.

**Table 3: Effect of Gender on Satisfaction with Major Curriculum (T-test and Cohen’s d effect size)**

Gender	n	Mean	SD	T-test p-value	Cohen’s d effect size
Female	3661	3.14	.46	-2.31 (0.021)	0.08
Male	1544	3.10	.48		

**Table 4: Results of Regression Analyses on Satisfaction with Major Curriculum<sup>a</sup>**

Variables	Model 1
Required course availability for major	.024
Course availability for electives in major	.020
Quality of instruction	.110**
Major course content	.001
Variety of courses	.023
Capstone experience	.122**
Academic advising	.172**
Overall college experience	.089**
Preparation for career or graduate school	.314**
Class size of major courses	.026
Grading in major courses	.081
F	254.847***
R	.762
R <sup>2</sup>	.581

Notes: <sup>a</sup> Standardized Regression Coefficients are reported; \*\*\*p<.001; N=5323

**Model 1: Factors affecting satisfaction with major curriculum**

