

Reasons Influence Students' Decisions to Change College Majors

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Abstract

The purpose of the study was to understand why students decide to change their majors and the factors that influence their decisions in the Middle East universities. The three categories presented by the different researchers in the reviewed literature; (1) Personal & course preferences; (2) influential issues and (3) job issues were the lens used by the researcher in addressing the relationship between the factors and students' later major change. The researcher wanted to explore students' perceptions about the reasons that mostly affected their decisions to change their majors. The participants were 1725 undergraduate students in a Middle East university of which 494 students were changing their majors. One survey was used to collect the data for this study: Influences on Choice of Major Survey. The researcher found that 28% of the students in this university were changing majors. She also found that college change had significant correlations with the negative factors presented in the three categories. The analysis showed that students in their first year were changing majors because of the difficulty of their prior majors ($r = -.207, p < .000$). Students in their second year were changing majors because of their college instructors ($r = -.019, p < .023$). Students in their third year were changing majors because of their prior majors that were difficult ($r = -.362, p < .046$) or not challenging ($r = -.227, p < .015$) and some of the introductory courses they did not like or were difficult ($r = .298, p < .001$). Students in their fourth year were changing majors because of their parents' influence to choose other majors ($r = .271, p < .009$)

Keywords: undergraduate students, major change, factors, influence.

Introduction

College students choose their majors for many reasons. Some of these reasons might be better than others. They may also change their majors for many reasons and some of these reasons might be better than others. Many theories and research studies have identified many factors that influenced students' decisions to change their selected majors. (Ismael, 2012; Dickson, 2010; Dietz, 2010; Zafar, 2010; Willcoxson & Wynder, 2010; MalGwi, Howe & Burnaby, 2005; John, 2000; Simpson, 1987). Ismael (2012) and Dickson (2010) noticed students may change majors between their first semester of study and graduation. They shared students usually change majors in their second semester of their first year or in their second year. Zafar (2011) found that overtime students may change their majors as they learn about their ability, taste and quality of match. The phenomenon of changing majors is common: 12% of the students in his sample changed majors. The analysis showed that learning plays a role in students' decision to switch their majors. This suggests that students who change majors are mainly responding to information in their own major and the new major.

Factors Influence College Major change

Higher education institutions are facing some challenges, which demand a deeper understanding of the reasons that influence students' decisions to change their majors (Dickson, 2010; Dietz, 2010; Ismael, 2012; Malgwi et al., 2005; Simpson, 1987; St. John, 2000; Wilcoxson & Wynder, 2010; Zafar, 2011). Positive and negative reasons influence students to change majors. Some students appeared to be driven to change their major because of positive factors about the new major, rather than negative factors related to the old major (Al Khateeb, 2012; Beffy et al., 2013; Keshishian et al., 2010; Malgwi, et al., 2005; Zafar, 2013).

Some authors believe that students might change their majors into other majors to receive higher salaries in jobs related to the new majors in which their current majors might not provide (Arcidiacono, 2011; Bartolj & Polance, 2012; Beffy et al., 2013; Beggs, Bantham & Taylor, 2006; Malgwi, Howe & Burnaby, 2005; Mohsen, 2013; Wilcoxson & Wynder, 2010). Willcoxson and Wynder (2010) mentioned when students change their career directions usually they change majors. Dietz (2010) shared students change majors for reasons of interest or opportunity. John (2000) mentioned some students change majors because the new majors they chose captured their interest, motivated them, made them happy and allowed them to use their strength. According to Mohsen (2013) students do not usually make a change in major except after being disappointed with their current major. Lafy (2010) added many students do not attend majors they like or fit in because of wrong information they get or miss. Evidence suggests that students miss out on good major selection that suits them in part because they are unaware of these opportunities (Hoxby & Turner, 2013; Supiano, 2011; Bayomi, 2011; Zafar, 2011).

Many researchers have identified three categories that have been shown to influence students' decisions to change their current major: **Personal & Course Preferences**, **Influential issues** and **Job Issues** (Arcidiacono et al., 2010; Bartolj & Polanec, 2012; Beffy et al., 2012; Beggs et al., 2008; Carnevale & Melton, 2011; DeMarie & Aloise-Young, 2003; Dietz, 2010; Galotti, 1999; García-Aracil et al., 2007; Keshishian et al., 2010; Malgwi et al., 2005; Mohsen, 2013; Najmi, 2014; Pampaloni, 2010; Pringle et al., 2010; Scott-Clayton, 2011; Simoes & Soares, 2010; Simpson, 2003; Song & Glick, 2004; St. John, 2000; Wilcoxson & Wynder, 2010; Wiswall & Zafar, 2011; Zafar, 2013).

Personal & Course Preferences

Many authors (Arcidiacono et al., 2010; Bartolj & Polanec, 2012; Beggs et al., 2008; Keshishian et al., 2010; Clayton, 2011; Wiswall & Zafar, 2011; Zafar, 2013) shared some students changed their majors because the new majors captured their interest, motivated them, allowed them to use and show their strength and made them happy because they enjoyed the coursework. Zafar (2011) found that overtime students may change their majors as they learn about their ability, taste and quality of match. In their study, Keshishian, et al., (2010) found that one of the reasons that influenced students to change to the new majors was their interest in the new majors. Willcoxson and Wynder (2010) added students decided to change to new the majors that matched their personal interest. Moore and Shulock (2011), Baker and Griffin (2010) and Dietz (2010) shared too that students' course preferences in an area drive them to change their majors.

Influential issues

The literature suggested that changing a major is associated with some certain variables and individuals who provide information and influence that affect students' decisions to change majors. These variables might be instructors, advisors, friends and parents (Al Khateeb, 2012; Baker & Griffin, 2010; Bayomi, 2011; Beggs et al., 2008; 2010; Hoxby & Turner, 2013; Malgwi et al., 2005; O'Banion, 2012; Pampaloni, 2010; Simoes & Soares, 2010; Zafar, 2013).. Dietz (2010) shared the influence of friends and family played a larger part on students' decisions to change and choose majors in which they advise them to enroll in.

Job Issues

Many authors shared that for students to remain in or change majors equals good salary, job security and career advancement (Arcidiacono, Hotz & Songman, 2011; Bartolj & Polance, 2012; Beffy et al., 2013; Beggs, Bantham & Taylor, 2006; Malgwi, Howe & Burnaby, 2005; Mohsen, 2013; Wilcoxson & Wynder, 2010). Willcoxson and Wynder (2010) mentioned students who changed their career directions usually change their majors. Dietz (2010) added students change majors for reasons of opportunities.

Theoretical Framework

The researcher divided the factors in the two sections in the survey that influenced students to change their majors (positive and negative) into three categories to analyze and understand "why" students decided to change their majors. These three categories with the components provided the theory and the lens that the researcher will use to address the relationships between college major change and the 18 factors influenced students' major change. The three categories were identified through some of the researchers who were interested in understanding why students usually change their majors (Ismael, 2012; Dickson, 2010; Dietz, 2010; Zafar, 2010; Willcoxson & Wynder, 2010; MalGwi, Howe & Burnaby, 2005; John, 2000; Simpson, 1987; Ismael, 2012; Dickson, 2010; Zafar, 2011; MalGwi, Howe and Burnaby, 2005; Willcoxson and Wynder, 2010; Mohsen, 2013; Wynder, 2010)

The first section; positive influences included 9 factors that influenced students to change their majors. The researcher divided these factors in to the three categories mentioned before that related to the reasons that influenced students to change their majors. The first category was **(Personal & Course Preferences)**. The researcher compiled 2 factors from the survey in this category. These factors were: *Interest in the subject & introductory courses*. The second category was **(Influential Issues)**. The researcher compiled 5 factors from the survey in this category. These factors were: *Discussion with other students, college advisor, advising nights, instructors and parent*. The third category was **(Job Issues)**. The researcher compiled 2 factors from the survey in this category. These factors were: *Availability of job opportunities and high level of payment in the field*

The second section; negative influences included 9 factors, and the researcher divided these factors in to the three categories related to students' later major change. The first category was **(Personal & Course Preferences)**. The researcher compiled 3 factors from the survey in this category. These factors were: *Prior major too difficult, prior major not challenging and introductory courses*. The second category was **(Influential Issues)**. The researcher compiled 4 factors in this category. These factors were: *Discussion with other students, college advisor, instructors and parent*. The third category was **(Job Issues)**. The researcher compiled two factors in this category. These factors were: *Level of job opportunities and Low level of pay in this field*.

Purpose of the Study

The purpose of the study was to understand *why* students decide to change their majors and the factors that influence their decisions in the Middle East universities. The three categories presented by the different researchers in the reviewed literature; (1) Personal & course preferences; (2) influential issues and (3) job issues were the variables used by the researcher in addressing the relationship between the factors and students' later major change. The researcher wanted to explore students' perceptions about the reasons that mostly affected their decisions to change their majors.

The following hypotheses were tested:

- Students might change their current majors because of personal and course preferences.
- Students might change their majors because of influential issues.
- Students might change their majors because of job issues.

Methodology

A quantitative design was used to address students' decisions to change their majors and the factors that influenced these decisions. The intention of the study was to see if the three categories related to the factors influenced students' major change affected students' decisions to change their majors in a Middle East university.

Participants

The participants in this study were 1725. There were 469 freshmen, 464 sophomores, 408 juniors and 384 senior students enrolled in five colleges in a Middle East university. (see Table 1 for the details).

Table 1: Student Demographics

Year in School	Gender		Age		College					
	Male	Female	17-24	25+	Educ.	Busin.	Law	Pharm.	Eng.	
Freshman	469	171	298	411	58	156	78	100	94	41
Sophomore	464	200	264	377	87	83	67	172	77	65
Junior	408	177	231	288	120	62	45	205	49	47
Senior	384	205	179	227	157	37	60	212	40	35

The Participants were 753 male students and 972 female students. There were 469 freshmen, 464 sophomores, 408 juniors and 384 senior students. Their ages ranged between 17 and 50 years (M=22.7). The university has five colleges; College of Education, Humanities and Social Sciences, College of Business Administration, College of Law, College of Pharmacy and College of Engineering and Information Technology. 338 were education students, 250 were business students, 689 were law students, 260 were pharmacy students and 188 were engineering & IT students.

Then the researcher looked at the numbers of the students who only changed their majors and they were 494 students. (see Table 2 for the details).

Table 1: Student Demographics (who changed their majors (N= 494)

Year in School	N	Gender		Age		College			
		Male	Female	17-24	25+	Educ.	Busin. Law	Pharm.	Eng.
Freshman	46	19	27	40	6	13	7	11	96
Sophomore	79	36	43	64	15	8	13	32	1610
Junior	52	35	17	29	23	2	3	39	35
Senior	35	14	21	23	12	0	3	21	74

Students who changed major were 226 male students and 268 female students. There were 46 freshmen, 79 sophomores, 52 juniors and 35 senior students. Their ages ranged between 17 and 50 years ($M=22.7$). The university has five colleges; College of Education, Humanities and Social Sciences, College of Business Administration, College of Law, College of Pharmacy and College of Engineering and Information Technology. 99 were education students, 87 were business students, 175 were law students, 66 were pharmacy students and 67 were engineering & IT students.

Instrument

One survey was used: *Influences on Choice of Major Survey*. Eighteen variables from the survey in two different sections were used to analyze the data (**Positive influences for major change**: *Interest in the subject, discussion with other students, college advisor, advising nights, instructors, introductory courses, job opportunities, parent and high level of payment in the field* & **negative influences** for major change: *Discussion with other students, prior major too difficult, prior major not challenging, college advisor, instructors, introductory courses, job opportunities, parent and low level of payment in the field*). The survey contains 8 items in which the first 4 represents the students' demographics. The remaining items are corresponding to each of the factors that influence student later major change. The Items utilize a (5-point-likert) scale with statements ranging from 1= no influence to 5= major influence. The researchers who developed the survey used in this study prepared a pilot study to make sure that the data in the questionnaire were reliable and accurate (Magwi et. al., 2005). They used Perseus survey Solutions software to collect the data. They developed the document in three stages. They used over 500 responses to clarify the questions and instructions. The researcher contacted the authors to use their survey and she received the authors' approval to use their questionnaire in her study.

Data Collection Procedures

The data were collected from students in a Middle East university in their first academic semester, 2014. After receiving the approval to conduct the study and visit classes, the researcher explained the purpose of her study to the professors and then to the students. They were informed that the survey would take 15 minutes to 20 minutes (during their classes).

Results

The three hypotheses the researcher analyzed were:

- Students might change their current majors because of personal and course preferences.
- Students might change their majors because of influential issues.
- Students might change their majors because of job issues.

Descriptive Statistics

The researcher analyzed the results to determine the influence of the 18 factors (Positive & Negative) on students' decisions to change their majors and to determine if there were any relationships between the factors which influenced students' decisions to change their current majors and the variables used in the survey. The means and standard deviations are presented for each of these variables.

Table 3: Means and Standard Deviations for the positive factors that influenced students to change their majors (N= 494).

	Interest	Discussion with Students	College Advisor	Advising Nights	Instructors
	M (sd)	M (sd)	M (sd)	M (sd)	M (sd)
Students	3.63 (1.4)	3.25 (1.4)	2.59 (1.4)	3.22 (1.4)	2.83 (1.5)
	Introductory Course	Job Opportunities	Parent	High level of payment	
	M (sd)	M (sd)	M (sd)	M (sd)	
Students	2.83 (1.5)	3.67 (1.3)	2.94 (1.6)	3.57 (1.4)	

The researcher noticed that the numbers of students who chose to change majors related to negative influences were 430 students for that she did the means and the standard deviations for the factors in the second section separately. **Table 4: Means and Standard Deviations for the negative factors that influenced students to change their majors (N= 430).**

	Discussion with Students	Prior Major Too Difficult	Prior Major Not Challenging	College Advisor	Instructors
	M (sd)	M (sd)	M (sd)	M (sd)	M (sd)
Students	2.59 (1.5)	2.90 (2.1)	2.68 (1.5)	2.40 (1.4)	2.51 (1.5)
	Introductory Course	Job Opportunities	Parent	Low level of payment	
	M (sd)	M (sd)	M (sd)	M (sd)	
Students	2.52 (1.4)	2.83 (1.5)	2.55 (1.4)	2.71 (1.5)	

The researcher is going to present the results of the three hypotheses according to the positive and negative factors in the survey. She will start with the positive factors that were divided in to the three categories: (*Personal & Course Preferences, Influential Issues and Job Issues*).

Hypothesis One

Hypothesis one indicates that students might change their majors because of the positive personal and course preferences. This category includes interest in the subject and introductory courses.

Table 4: Frequencies of students’ replies regarding the 2 positive factors influenced their decisions to change their majors (N= 494)

Factors influenced major change	No Influence (1) (N) %	Minor Influence (2) (N) %	Somewhat minor influence (3) (N) %	Somewhat major influence (4) (N) %	Major Influence (5) (N) %
1. Interest in the subject	(63) % 12.8	(51) % 10.3	(79) % 16	(111) % 22.5	(190) % 38.5
2. Introductory Courses	(138) % 27.9	(76) % 15.4	(101) % 20.4	(86) % 17.4	(93) % 18.8

Table 4 introduces the frequencies for each factor that influenced students’ decisions to change their current majors in all four years in the five colleges at the university. Looking at the table, the major influence on students’ decisions to change majors was interest in the new major.

Table 5: Frequencies of students' replies regarding the 2 positive factors with major influence degree on students' decisions to change current majors in all four years in the five colleges (N=494)

College		Interest in Subject	Introductory Courses
Major Influence	(N)	(N) %	(N) %
Education, Humanities & Social Sciences	(99)	(41) % 12.1	(21.7) % 18.8
		Interest in Subject	Introductory Courses
Major Influence	(N)	(N) %	(N) %
Business Administration	(87)	(11) % 42.3	(2) % 7.7
		Interest in Subject	Introductory Courses
Major Influence	(N)	(N) %	(N) %
Law	(175)	(11) % 42.3	(2) % 7.7
		Interest in Subject	Introductory Courses
Major Influence	(N)	(N) %	(N) %
Pharmacy	(66)	(7) % 20.0	(6) % 17.1
		Interest in Subject	Introductory Courses
Major Influence	(N)	(N) %	(N) %
Engineering & Information Technology	(67)	(10) % 40.0	(8) % 32.0

Table 5 shows that all students who decided to change majors into different majors were mostly influenced by their interest in the new majors.

Zero Order Correlation Table

In this study, zero order correlations were created to respond to the 3 hypotheses outlined. For that, Person r correlations were used in this study because they enabled the researcher to describe the relationships between college major change and the variables used in the survey.

Table 6: Zero Order Correlations of the 2 factors influenced students' decisions to change majors regarding personal & course preference category (Interest in subject & introductory course (N= 494)

Year		Interest in Subject	Introductory Courses
		r (p)	r (p)
First year	College	.035(<.816)	.114(<.452)
		Interest in Subject	Introductory Courses
		r (p)	r (p)
Second Year	College	-.206(<.069)	.115(<.314)
		Interest in Subject	Introductory Courses
		r (p)	r (p)
Third Year	College	-.184 (<.190)	.184(<.190)
		Interest in Subject	Introductory Courses
		r (p)	r (p)
Fourth Year	College	.074(<.671)	.070 (<.691)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed)

As presented in the table. The researcher did not find any significant correlations between deciding to change majors and the 2 positive factors in this category (*interest in the subject and introductory courses*).

Hypothesis Two

To answer hypothesis two, the researcher looked at the five positive factors related to influential issues. Hypothesis two indicates that students might change majors because of their discussion with other students about the majors, college advisor, advising nights, instructors and their parents.

Table 7: Frequencies of students’ replies regarding the 5 positive factors influenced their decisions to change their majors (N=494)

Factors influenced major change	No Influence (1) (N) %	Minor Influence (2) (N) %	Somewhat minor influence (3) (N) %	Somewhat major influence (4) (N) %	Major Influence (5) (N) %
1. Discussion with other students	(74) % 15.0	(77) % 15.6	(101) % 20.4	(135) % 27.3	(107) % 21.7
2. College Advisor	(172) % 34.8	(71) % 14.4	(107) % 21.7	(74) % 15	(70) % 14.2
3. Advising Nights	(92) % 18.6	(50) % 10.1	(115) % 23.2	(130) % 26.3	(107) % 21.7
4. Instructors	(155) % 31.4	(62) % 12.6	(92) % 18.6	(81) % 16.4	(104) % 21.1
5. Parent	(138) % 27.9	(74) % 15.0	(81) % 16.4	(77) % 15.6	(124) % 25.1

Table 7 introduces the frequencies for each factor that influenced students’ decisions to change their current majors in all four years in the five colleges at the university. Looking at the table, the major influence on students’ decisions to change majors was the influence of parents followed by students’ discussion with other students, advising nights then instructors. The table shows that college advisor received the least chosen factor by students.

Table 8: Frequencies of students’ replies regarding the 5 positive factors with major influence degree on Students’ decisions to change current majors in all four years in the five colleges (N=494)

College		Discussion with other students	College Advisor	Advising Nights	Instructors	Parents
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %	(N) %
Education, Humanities& Social Sciences	(99)	(5) % 21.7	(2) % 8.7	(7) % 30.4	(5) % 21.7	(7) % 30.4
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %	(N) %
Business Administration	(87)	(5) % 19.2	(4) % 15.4	(8) % 30.8	(7) % 26.9	(6) % 23.1
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %	(N) %
Law	(175)	(26) % 25.2	(21) % 20.4	(22) % 21.4	(26) % 25.2	(21) % 20.4
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %	(N) %
Pharmacy	(66)	(5) % 14.3	(5) 14.3	(8) % 22.9	(5) % 14.3	(8) % 22.9
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %	(N) %
Engineering& Information Technology	(67)	(7)% 28.8	(4)% 16.0	(4) % 16	(5) % 20.0	(9) % 36.0

Table 8 shows that education students who decided to change majors were mostly influenced by their parents and the advising nights, while business students who decided to change majors were mostly influenced by advising nights, instructors and their parents. Law students who decided to change majors were mostly influenced by their discussion with other students about the new majors, instructors and advising nights, while pharmacy students who decided to change their majors were mostly influenced by the advising nights and their parents. Engineering & IT students who decided to change majors were influenced by their parents and discussion with other students about the new majors.

Zero Order Correlation Table

In this study, zero order correlations were created to respond to the 3 hypotheses outlined. For that, Person r correlations were used in this study because they enabled the researcher to describe the relationships between students' decisions to change major and the variables used in the survey.

Table 9: Zero Order Correlations of the 5 positive factors influenced students' decisions to change majors regarding influential issues category (*Discussion with other students, college advisor, advising nights, instructors & parents*, N=494)

Year		Discussion with students	College Advisor	Advising Nights	Instructors	Parents
		r (p)	r (p)	r (p)	r (p)	r (p)
First year	College	-.021(<.072)	.072(<.637)	-.261(<.079)	.020(<.893)	.003(<.984)
		Discussion with students	College Advisor	Advising Nights	Instructors	Parents
		r (p)	r (p)	r (p)	r (p)	r (p)
Second Year	College	-.043(<.707)	-.010(<.929)	-.019(<.868)	.053(<.645)	-.022(<.847)
		Discussion with students	College Advisor	Advising Nights	Instructors	Parents
		r (p)	r (p)	r (p)	r (p)	r (p)
Third Year	College	-.059(.678)	-.157(<.267)	-.143(<.345)	-.066(<.641)	.161(<.256)
		Discussion with students	College Advisor	Advising Nights	Instructors	Parents
		r (p)	r (p)	r (p)	r (p)	r (p)
Fourth Year	College	.067(<.703)	.027(<.878)	.125(<.476)	-.130(<.455)	.240(<.165)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed)

As presented in the table. The researcher did not find any significant correlations between deciding to change majors and the 5 positive factors in this category (*Discussion with other students, college advisor, advising nights, instructors and parents*).

Hypothesis Three

Hypothesis three indicates that students might change majors because of the positive assumptions that their majors provide good job opportunities and pay them well after graduation. This category related to job issues in which it includes: Job opportunities and high level of payment in the field.

Table 10: Frequencies of students' replies regarding the 2 positive factors influenced their decisions to change their majors (*Job opportunities & High level of payment*) (N= 494)

Factors influenced major change	No Influence (1)(N) %	Minor Influence (2)(N) %	Somewhat minor influence (3)(N) %	Somewhat major influence (4)(N) %	Major Influence (5)(N) %
1. Job Opportunities	(49) % 9.9	(38) % 7.7	(115) % 23.1	(114) % 23.1	(178) % 36.0
2. High Level of Payment in the Field	(66) % 13.4	(39) % 7.9	(105) % 21.3	(113) % 22.9	(171) % 34.6

Table 10 introduces the frequencies for each factor that influenced students' decisions to change their current majors in all four years in the five colleges at the university. Looking at the table, the major influence on students' decisions to change majors was almost job opportunities after graduating from the university.

Table 11: Frequencies of students' replies regarding the 2 positive factors with major influence degree on students' decisions to change current majors in all four years in the five colleges (N=494)

College		Job Opportunities	High Level of Payment
Major Influence	(N)	(N) %	(N) %
Education, Humanities & Social Sciences	(99)	(8) % 34.8	(9) % 39.1
		Job Opportunities	High Level of Payment
Major Influence	(N)	(N) %	(N) %
Business Administration	(87)	(12) % 46.2	(10) % 38.5
		Job Opportunities	High Level of Payment
Major Influence	(N)	(N) %	(N) %
Law	(175)	(40) % 38.8	(36) % 34.0
		Job Opportunities	High Level of Payment
Major Influence	(N)	(N) %	(N) %
Pharmacy	(66)	(15) % 42.9	(15) % 42.9
		Job Opportunities	High Level of Payment
Major Influence	(N)	(N) %	(N) %
Engineering & Information Technology	(67)	(7) % 28.0	(12) % 48.0

Table 11 shows that education students who decided to change majors into different majors were mostly influenced by both high salaries and job opportunities while business students who decided to change their majors were mostly influenced by job opportunities. Law students were mostly influenced by job opportunities too and pharmacy students were mostly influenced by both factors; job opportunities and getting high salaries. Engineering & IT students were mostly influenced by getting high salaries from jobs related to the new majors they chose to major in.

Zero Order Correlation Table

The researcher did zero order correlations to see if any relationships might appear to be between college major change and the variables used in this hypothesis.

Table 12: Zero Order Correlations of the 2 positive factors influenced students' decisions to change majors regarding job issues category (*Job opportunities & high level of pay*) (N= 494)

Year		Job Opportunities	High level Of Pay
		r (p)	r (p)
First year	College	.241 (<.106)	.120 (<.428)
		Job Opportunities	High level Of Pay
		r (p)	r (p)
Second Year	College	-.007 (<.950)	.007 (<.949)
		Job Opportunities	High level Of Pay
		r (p)	r (p)
Third Year	College	-.028 (<.842)	.075 (<.599)
		Job Opportunities	High level Of Pay
		r (p)	r (p)
Fourth Year	College	-.023 (-<.007)	.070 (-<.968)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed)

As presented in the table. The researcher did not find any significant correlations between deciding to change majors and the 2 positive factors in this category (Job opportunities & high level of payment).

Through this part, the researcher is going to present the results of the three hypotheses according to the negative factors in the survey that were divided in to the three categories: (Personal & Course Preferences, Influential Issues and Job Issues). The researcher compiled three factors from the survey in the first category; personal & course preferences. These factors were: Prior major too difficult, prior major not challenging and introductory courses. The second category was (Influential Issues).The researcher compiled 4 factors in this category. These factors were: Discussion with other students, college advisor, instructors and parent. The third category was (Job Issues). The researcher compiled two factors in this category. These factors were: Level of job opportunities and Low level of pay in this field.

Hypothesis One

Hypothesis one indicates that students might change their majors because of the negative assumptions that their prior majors were too difficult, their prior majors were not challenging and the introductory courses they took were not interesting or difficult for them (Personal & Course Preferences)

Table 13: Frequencies of students' replies regarding the 3 negative factors influenced their decisions to change their majors (Prior major too difficult, prior majors not challenging & the introductory courses) (N= 430)

Factors influenced major change	No Influence (1) (N) %	Minor Influence (2) (N) %	Somewhat minor influence (3) (N) %	Somewhat major influence (4) (N) %	Major Influence (5) (N) %
1. Prior Major too Difficult	(134) % 27.1	(59) % 11.9	(72) % 14.6	(74) % 15.0	(90) % 18.2
2. Prior Major not Challenging	(146) % 29.6	(64) % 13.0	(81) % 16.4	(59) % 11.9	(80) % 16.2
3. Introductory Courses	(147) % 29.8	(80) % 16.2	(87) % 17.6	(63) % 12.8	(53) % 10.7

Table 13 introduces the frequencies for each factor that influenced students' decisions to change their current majors in all four years in the five colleges at the university. Looking at the table, the major influence on students' decisions to change majors was prior major was too difficult.

Table 14: Frequencies of students' replies regarding the 3 negative factors with major influence degree on students' decisions to change current majors in all four years in the five colleges (N=430)

College		Prior Major Too Difficult	Prior Major Not Challenging	Introductory Courses
Major Influence	(N)	(N) %	(N) %	(N) %
Education, Humanities & Social Sciences	(96)	(4) % 17.4	(3) % 13.0	(5) % 21.7
		Prior Major Too Difficult	Prior Major Not Challenging	Introductory Courses
Major Influence	(N)	(N) %	(N) %	(N) %
Business Administration	(78)	(2) % 7.2	(3) % 11.5	(4) % 15.4
		Prior Major Too Difficult	Prior Major Not Challenging	Introductory Courses
Major Influence	(N)	(N) %	(N) %	(N) %
Law	(144)	(14) % 13.6	(24) % 23.3	(5) % 4.9
		Prior Major Too Difficult	Prior Major Not Challenging	Introductory Courses
Major Influence	(N)	(N) %	(N) %	(N) %
Pharmacy	(52)	(3) % 8.6	(3) % 8.6	(2) % 5.7
		Prior Major Too Difficult	Prior Major Not Challenging	Introductory Courses
Major Influence	(N)	(N) %	(N) %	(N) %
Engineering & Information Technology	(60)	(1) % 4.0	(6) % 24.0	(4) % 16.0

Table 14 shows that education and students who decided to change majors into different majors were mostly influenced by the fact that they liked some introductory courses related to the new majors more than their current majors. Law students who decided to change majors because their prior major was not challenging. Some pharmacy students decide to change majors because their prior major was to difficult while other pharmacy students shared that they decided to change their major because their current major was not challenging. Engineering & IT students who decided to change their major were mostly influenced by the fact that their current major was not challenging.

Zero Order Correlation Table

The researcher conducted a correlate analysis between deciding to change major and the negative factors related to personal & course preferences to see if any relationships might appear to be between college major change and the variables used in this hypothesis.

Table 15: Zero Order Correlations of the 3 negative factors influenced students’ decisions to change majors regarding *personal & course preferences category (Prior major too difficult, prior major not challenging and introductory courses) (N=430)*

Year		Prior Major Too Difficult	Prior Major Not Challenging	Introductory Courses
		r (p)	r (p)	r (p)
First year	College	-.207*($<.046$)	-.053($<.611$)	-.105($<.313$)
		Prior Major Too Difficult	Prior Major Not Challenging	Introductory Courses
		r (p)	r (p)	r (p)
Second Year	College	-.112($<.203$)	-.100($<.255$)	-.134($<.129$)
		Prior Major Too Difficult	Prior Major Not Challenging	Introductory Courses
		r (p)	r (p)	r (p)
Third Year	College	-.362**($<.000$)	-.227*($<.015$)	-.298**($<.001$)
		Prior Major Too Difficult	Prior Major Not Challenging	Introductory Courses
		r (p)	r (p)	r (p)
Fourth Year	College	-.078($<.455$)	-.163($<.119$)	.455($<.050$)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

As presented in the table, College change has a significant correlation with *prior major too difficult in the first year* ($r=-.207, p<.046$). College change has significant correlations with *prior major too difficult* ($r=-.362, p<.000$), *prior major not challenging* ($r=-.227, p<.015$) and *introductory courses* ($r=-.298, p<.001$) in the third year.

Hypothesis Two

Hypothesis two indicates that students might change majors because of the negative assumption and feedback they received from their discussion with other students about their current majors, college advisors, instructors and parents (*Influential Issues*).

Table 16: Frequencies of students’ replies regarding the 4 negative factors influenced their decisions to change their majors (*Discussion with other students, college advisors, instructors and parents (N= 430)*)

Factors influenced major change	No Influence (1) (N) %	Minor Influence (2) (N) %	Somewhat minor influence (3) (N) %	Somewhat major influence (4) (N) %	Major Influence (5) (N) %
1. Discussion with other students	(163) % 33	(61) % 12.3	(72) % 14.6	(54) % 10.9	(80) % 16.2
2. College Advisor	(172) % 34.8	(70) % 14.2	(78) % 15.8	(62) % 12.6	(48) % 9.7
3. Instructors	(168) % 34.0	(59) % 11.9	(82) % 16.6	(55) % 11.1	(66) % 13.4
4. Parents	(159) % 32.2	(69) % 14.0	(69) % 14.0	(59) % 14.0	(64) % 13.0

Table 16 introduces the frequencies for each factor that influenced students’ decisions to change their current majors in all four years in the five colleges at the university. Looking at the table, the major influence on students’ decisions to change majors was their discussions with other students about their current majors.

Table 17: Frequencies of students’ replies regarding the 4 negative factors with major influence degree on students’ decisions to change current majors in all four years in the five colleges (N=430)

College		Discussion with other students	College Advisor	Instructors	Parents
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %
Education, Humanities& Social Sciences	(96)	(17) % 5.0	(12) % 3.6	(19) % 5.5	(23) % 6.8
		Discussion with other students	College Advisor	Instructors	Parents
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %
Business Administration	(78)	(12) % 4.8	(8) % 3.2	(13) % 5.2	(9) % 3.6
		Discussion with other students	College Advisor	Instructors	Parents
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %
Law	(144)	(32) % 4.6	(20) % 2.9	(23) % 3.3	(16) % 2.3
		Discussion with other students	College Advisor	Instructors	Parents
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %
Pharmacy	(52)	(8) % 3.1	(1) % .4	(2) % .8	(8) % 3.1
		Discussion with other students	College Advisor	Instructors	Parents
Major Influence	(N)	(N) %	(N) %	(N) %	(N) %
Engineering & Information Technology	(60)	(11) % 5.9	(7) % 3.7	(9) % 4.8	(5) % 4.3

Table 17 shows that education students who decided to change majors were mostly influenced by their parents and their instructors. Business students who decided to change majors were mostly influenced by their instructors and their discussions with other students. Law students who decided to change majors were mostly influenced by their discussion with other students about the majors. Pharmacy students who decided to change their majors were mostly influenced by their discussions with other students about the majors and their parents. Engineering & IT students who decided to change majors were influenced by their discussion with other students about the majors and their instructors.

Zero Order Correlation Table

The researcher conducted a correlate analysis between deciding to change major and the negative factors related to influential issues to see if any relationships might appear to be between college major change and the variables used in this hypothesis.

Table 17: Zero Order Correlations of the 4negative factors influenced students' decisions to change majors regarding *influential issues category (Discussion with other students, college advisors, instructors and parents)* (N=430)

Year		Discussion with students	College Advisor	Instructors	Parents
		r (p)	r (p)	r (p)	r (p)
First year	College	.024 (<.822)	-.060 (<.568)	.129 (<.214)	-.026 (<.804)
		Discussion with students	College Advisor	Instructors	Parents
		r (p)	r (p)	r (p)	r (p)
Second Year	College	.039 (<.664)	-.022 (<.804)	-.019* (<.023)	-.045 (<.612)
		Discussion with students	College Advisor	Instructors	Parents
		r (p)	r (p)	r (p)	r (p)
Third Year	College	-.281** (.003)	-.127 (<.181)	-.181 (<.054)	-.104 (<.273)
		Discussion with students	College Advisor	Instructors	Parents
		r (p)	r (p)	r (p)	r (p)
Fourth Year	College	.084 (<.423)	.160 (<.126)	.030 (<.778)	-.271** (<.009)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

As presented in the table, College change has a significant correlation with *college advisors* in the second year ($r=-.199, p<.023$). College change has significant correlations with *students' discussions with other students* ($r=-.281, p<.003$) in the third year and *college change* has a significant correlation with *parents' influence* in the fourth year ($r=.271, p<.009$).

Hypothesis Three

To answer hypothesis three, the researcher looked at the two factors compiled in the category related to job issues that might influenced students to change their college majors. Hypothesis three indicates that students might change their current majors because of the negative assumption they have about their majors which is: their majors do not provide good job opportunities and they would receive low level of payment after graduation. This category includes job opportunities & low level of payment factors.

Table 18: Frequencies of students' replies regarding the 2 negative factors influenced their decisions to change their majors (*Job opportunities & low-level of payment*) (N= 430)

Factors influenced major change	No Influence (1) (N) %	Minor Influence (2) (N) %	Somewhat minor influence (3) (N) %	Somewhat major influence (4) (N) %	Major Influence (5) (N) %
1. Job Opportunities	(129) % 26.0	(56) % 11.3	(89) % 18.0	(70) % 14.2	(86) % 17.4
2. Low Level of Payment in the Field	(146) % 29.6	(44) % 8.9	(106) % 21.5	(54) % 10.9	(80) % 16.2

Table 18 introduces the frequencies for each factor that influenced students’ decisions to change their current majors in all four years in the five colleges at the university. Looking at the table, the major influence on students’ decisions to change majors was almost the assumption about their majors that they do not provide good job opportunities after graduating from the university.

Table 19: Frequencies of students’ replies regarding the 2 negative factors with major influence degree on students’ decisions to change current majors in all four years in the five colleges (Job opportunities & low level of payment) (N=430)

College		Job Opportunities	Low Level of Payment
Major Influence	(N)	(N) %	(N) %
Education, Humanities& Social Sciences	(96)	(24) % 7.1	(20) % 5.9
		Job Opportunities	Low Level of Payment
Major Influence	(N)	(N) %	(N) %
Business Administration	(78)	(20) % 8.0	(16) % 5.4
		Job Opportunities	Low Level of Payment
Major Influence	(N)	(N) %	(N) %
Law	(144)	(26) % 3.8	(28) % 4.1
		Job Opportunities	Low Level of Payment
Major Influence	(N)	(N) %	(N) %
Pharmacy	(52)	(6) % 2.3	(5) % 1.9
		Job Opportunities	Low Level of Payment
Major Influence	(N)	(N) %	(N) %
Engineering& Information Technology	(60)	(10) % 5.3	(11) % 5.9

Table 19 shows that education and business students who decided to change majors into different majors were mostly influenced by job opportunities. Law students who decided to change their majors were mostly influenced by the low level of payment their major provides. Pharmacy and Engineering & IT students were mostly influenced by both job opportunities and low level of payment in the field.

Zero Order Correlation Table

The researcher did zero order correlations to see if any relationships might appear to be between college major change and the variables used in this hypothesis.

Table 20: Zero Order Correlations of the 2 negative factors influenced students’ decisions to change majors regarding job issues category (Job opportunities & low level of pay (N= 430)

Year		Job Opportunities	Low level Of Pay
		r (p)	r (p)
First year	College	-.011 (<.916)	-.080 (<.436)
		Job Opportunities	Low level Of Pay
		r (p)	r (p)
Second Year	College	.093 (<.417)	-.049 (<.673)
		Job Opportunities	Low level Of Pay
		r (p)	r (p)
Third Year	College	B (<.000)	B (<.000)
		Job Opportunities	Low level Of Pay
		r (p)	r (p)
Fourth Year	College	-.088 (-<192)	.537 (.<173)

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed)

b. Cannot be computed because at least one of the variables is constant.

As presented in the table, the researcher did not find any significant correlations between deciding to change majors and the 2 negative factors in this category (*Job opportunities & low level of payment*).

Discussion

The purpose of the study was to understand *why* students usually decide to change their majors and the factors that influence their decisions in the Middle East universities. The three categories presented by the different researchers in the reviewed literature; (1) Personal & course preferences; (2) influential issues and (3) job issues were the variables used by the researcher in addressing the relationship between the factors and students' later major change. The researcher wanted to explore students' perceptions about the reasons that mostly affected their decisions to change their majors. The primary assumption of the study was: One of the three categories or more (*personal & course preferences, influential issues and job issues*) would influence students' decisions to change their majors in particular years. The sample of the study was undergraduate students in all four years in the five colleges in a Middle East university.

The first section; positive influences included 9 factors that influenced students to change their majors. The researcher divided these factors in to the three categories mentioned before that related to the reasons that influenced students to change their majors. The first category was (**Personal & Course Preferences**). The researcher compiled 2 factors from the survey in this category. These factors were: *Interest in the subject & introductory courses*). The second category was (**Influential Issues**). The researcher compiled 5 factors from the survey in this category. These factors were: *Discussion with other students, college advisor, advising nights, instructors and parent*. The third category was (**Job Issues**). The researcher compiled 2 factors from the survey in this category. These factors were: *Availability of job opportunities and high level of payment in the field*

The second section; negative influences included 9 factors, and the researcher divided these factors in to the three categories related to students' later major change. The first category was (**Personal & Course Preferences**). The researcher compiled 3 factors from the survey in this category. These factors were: *Prior major too difficult, prior major not challenging and introductory courses*. The second category was (**Influential Issues**). The researcher compiled 4 factors in this category. These factors were: *Discussion with other students, college advisor, instructors and parent*. The third category was (**Job Issues**). The researcher compiled 2 factors in this category. These factors were: *Level of job opportunities and Low level of pay in this field*.

Results of the study showed that students who decided to change majors were positively influenced by their interest in the new majors, parents' advises to change their current majors to better ones, discussing with other students about the new majors, their instructors and the availability of job opportunities related to the new majors after graduation. This study also shared that students were influenced negatively by the difficulty of the prior majors, their discussion with other students about their current majors negatively and the assumption that their current majors do not provide good job opportunities after graduation. Looking at the co relational analysis for the positive and negative factors, the researcher found that college change had significant correlations with the *negative* factors presented in the three categories. The analysis showed that students in their first year were changing majors because of the difficulty of their prior majors ($r = -.207, p < .000$). Students in their second year were changing majors because of their college instructors ($r = -.019, p < .023$). Students in their third year were changing majors because of their prior majors that were difficult ($r = -.362, p < .046$) or not challenging ($r = -.227, p < .015$) and some of the introductory courses they did not like or were difficult ($r = .298, p < .001$). Students in their fourth year were changing majors because of their parents' influence to choose other majors ($r = .271, p < .009$).

Looking precisely at colleges, education students were changing their majors because of their parents' influences. Business students were changing majors because of job opportunities factor. Law students were changing majors because of their negative discussions with other students about their major. Pharmacy students were changing majors because of their negative discussions with other students about their current major and their parents' influences to change their current major. Engineering & IT students were changing majors because of their negative discussions with other students about their current major and the negative assumption of low level of payment in the field after graduation.

The researcher found that:

- 494 out of 1725 (28%) of the students in this university were changing majors in 2014.

- 430 out of 494 (87%) of the students were sharing positive and negative assumptions about their initial selected majors and the new majors.
- 64 out of the 494 (13%) of the students who changed majors were changing them because of the positive factors related to the new majors.
- 101 out of 494 (20%) of freshmen students at this university changed their majors, 148 out of 494 (30%) of sophomores, 136 out of 494 (27%) of juniors and 109 out of 494 (22%) of seniors.
- Some of the students who changed majors were changing them into the new majors the university initiated in the first semester of 2014. To cope up with the new job openings in the country, the university decided to initiate three needed majors and they were: Special education, applied sociology and applied psychology.

Conclusion

By knowing some of the reasons that influence students to change their majors, educators and universities can work more on the challenging and the phenomena of students' changing majors and help their students to select majors that suit them from the beginning. The researcher found that students in this university corresponded to the negative factors more than the positive ones while thinking of changing their majors. Some of them decided to change majors because they were discussing the negative issues regarding their current majors with other students. Other students were assuming and hearing from others that they would receive low salaries in the field of their studies after graduation. Other students were changing majors because of the difficulties they faced through studying in their majors. Other students were listening to their parents' opinions that the majors they chose were not convenient to them and they had to change them to other majors. Interestingly, the researcher found that students' decisions to change majors related to many different reasons and other researchers might find other different reasons. The researcher also found that the influence of words is very powerful. Students were changing majors because of their discussions with other students and parents about their current majors and their expected jobs and earnings after graduation which influenced their decisions to pick up different majors to study.

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