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**INTERNATIONAL & COMPARATIVE EDUCATION | RESEARCH ARTICLE** 

# American universities in the Middle East: A student's perspective

Linda Smail and Ginger Silvera

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Additional information is available at the end of the article

# **INTERNATIONAL & COMPARATIVE EDUCATION | RESEARCH ARTICLE** American universities in the Middle East: A student's perspective

Linda Smail<sup>1\*</sup> and Ginger Silvera<sup>2</sup>

Abstract: Many American universities located in the Middle East try to offer the stamp of higher quality in education that the United States provides and delivers. These institutions are doing an incredible job of providing opportunity for youths of that region to obtain an American education. However, these universities bear the stereotype that they are not applying a genuinely American-style teaching system and methods, but rather an Arabic style with an American name. The research question asks to which extent this stereotype is true. The purpose of the study is to determine if there is/are relationship(s) among the personality types of students enrolled in an American institution in an Arabic country, their background and other factors related to their choice of this institution, and their opinion about the teaching styles applied in this university. Linear regression is used in this study along with Bayesian networks approach to link those different variables and detect possible relationships among these variables. The data used in this paper were derived from an accessible population of 508 students during the Fall of 2011 at a US institution in Jordan. The study reveals that American education is the main reason students chose to join an American university in their Arabic country. It also revealed that

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Ginger Silvera is an assistant professor in the Department of Interdisciplinary Studies at Zayed University, Dubai, United Arab Emirates where she teaches Global Awareness and Research Methods. She obtained her PhD in Political Science specializing in World Politics and Public Policy from Claremont Graduate University in 2012. Her research interests are in Public Administration, Education and Management. This study coincides with her research on representative bureaucracy in higher education in the Middle East. She has provided management training and consulting to the Abu Dhabi Police Department, Ministry of Interior.

#### PUBLIC INTEREST STATEMENT

American universities in the Middle East region try to offer students the benefits of an American educations while at their home country. However, these American universities bear the stereotype that they are not applying a genuinely Americanstyle teaching system and methods, but rather an Arabic style with an American name. This article describes to which extent this stereotype is true and determines some of the reasons students in the Middle East Join American universities in their country. It looks at relationship(s) among the personality types of students, their background, and other factors related to their choice of this institution, and their opinion about the teaching styles applied in this university. It is found that American education is the main reason students chose to join an American university in their Arabic country. It also revealed that such reason is related to gender, personality type, and qualifications among this group of university students.

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such reason is related to gender, personality type, and qualifications among this group of university students. More than 95% *of* the students think that the standards applied in the local American universities are less than 50% of those applied in the States.

# Subjects: Higher Education; International & Comparative Education; Multicultural Education

Keywords: personality types; American universities; American education; MBTI; Bayesian networks

#### 1. Introduction

Obtaining higher education is crucial for students to advance in their careers, which enables them to improve their critical thinking skills for overall personal growth. In comparing American universities to other universities across the world, the American higher education system is considered by far the highest standard in education (Baty, 2010). American universities offer the best in research, faculty, and diverse learning environments. In 2015, American higher education is still ranked number one for providing the aforementioned factors and producing an educated workforce that meets the demands of the labor workforce (Universitas 21, n.d.).

International students make dedicated efforts to learn the English language with an interest in pursuing higher education overseas. There are numerous benefits for American universities receiving international students, such as diversifying campus environments and receiving out-of-state tuition fees (Altbach, 2007; Altbach & McGill Peterson, 1998).

Many American universities operating in Middle Eastern (ME) countries try to bear the stamp of higher quality in the education that they provide and deliver. These institutions are doing an amazing job of providing the chance for youths of that region to get an education, in fact, an American education that is second to none. Still, a common stereotype about American universities is that they are not applying a real American-style teaching system, but just an Arabic style education with an American name.

However, there is a trend where students in the Arab world are increasingly attending American universities in the Middle East. According to Romani (2009), "The immediate expression of the blossoming of Arab Academe is a dramatic improvement in the academic offerings in the region, both in quality and in quantity" (p. 4). American universities have become more attractive in the Middle East because of the American name and the known quality of education. American universities in the Middle East are known to provide a quality liberal arts education along with American accreditation (Anderson, 2017). These private institutions rely on teaching in English as well as a Western style pedagogy of teaching. In comparison to Arab universities, Alayan, Rohde, and Dhouib (2012) suggest Arab educational systems are outdated and rely on memorization, which decreases the impact of learning for Arab students. Arab universities are not equipped with the modern technology and the teaching skills that enhance critical thinking skills. Moreover, learning in Arabic can be a problem to students that are interested in furthering their careers on an international level since English is the common language.

Therefore, students are interested in seeking degrees from American universities in the Middle East that can be recognized in North America or Europe (Kabir, Newark, & Yunnes, 2016). Students' perceive that receiving a degree from Western institutions is prestigious than a receiving a degree from an Arab university (Jose & Chacko, 2017; O'Sullivan, 2015).

Arab universities have been adopting the Western model of teaching since the 1970s and 1980s (Khelifa, 2010; Wilkins, 2011). This is to prepare their workforce to meet the global workforce standards and learning using the common language of English. American education is considered to have higher standards than Arabic education because of the academic quality and critical thinking standards rather than relying on mere listening and memorization techniques used in the Middle East (Benard, 2006). Wilkins (2011) suggests Arab countries have not had the opportunity to fully adapt to Western education models since they are still relatively new and primary and secondary education still adopt the old models. In universities adopting the Western model, Arab students that attend have to be brought up full speed in thinking critically and learning in English. Foreign universities have improved the knowledge of students in the labor market, while giving employers access to an educated human capital base. However, most young men in Arab countries are still relying on highly paid government positions and some women will be resorting to becoming housewives after receiving their education (Abdulla, 2015). Therefore, entrepreneurship and business skills are important in this region (Benard, 2006).

Western-educated faculty focus on learning outcomes and assessments to ensure students are meeting the objectives and outcomes of the courses. In addition, faculty are interested in how to ensure students' education can be carried into their workforce and in their daily lives (Arum, Roksa, & Cook, 2016). American universities rely on critical thinking, which is important for students' intellectual skills and to prepare them for the workforce (Liu, Frankel, & Roohr, 2014). Critical thinking aides in problem-solving and decision-making, which allows for students to expand their skills and forward mobility (Halpern, 2003). Loes, Salisbury, and Pascarella (2015) argue that when students perceive clear guidelines and instructions from faculty, students critical thinking skills increase. Their study was done on a survey of American faculty. Therefore, developing countries heavily rely on Western education such as American transnational campuses to develop their educational and economic workforce (Altbach, 2015).

In this study, we ask to what extent this stereotype *about American Universities in the Middle East* is true. In addition, we are also interested in knowing the real reasons that lead an Arab student to join an American institution in his/her own country instead of a local institution. In the following study, we use personality types of students to understand their preference in education systems. Then, we describe the research methods used in this study. First, a linear regression analysis is used to understand the personality types of students and the reasons they pursue attending an American university. Finally, we discuss the policy implications for American universities in the Middle East. We propose to use the Bayesian networks (BNs) approach to determine possible relationships among the variables involved in this study—primarily students' personality types and the reason they pursue attending an American university. The advantage behind using BNs is that they are easy to read and interpret without extensive knowledge of the theory.

#### 2. Personality type

Personality types, as determined by the Myers–Briggs Type Indicator (MBTI), are a manifestation of the theory for psychological types proposed by Jung (1921/1971). Jung believed that when our minds are active, we are involved in one of two mental functions: (1) receiving (perceiving) information, or (2) organizing the information so that we can reach a conclusion (judging).

Myers and McCaulley (1985) refined the MBTI to make Jung's psychological-type theory more meaningful and useful in everyday life. The MBTI consists of four separate indices that, when viewed individually, illustrate one of four preferred choices for describing how people perceive and react in a given situation: Extraversion-Introversion (EI), Sensing-Intuition (SN), Thinking-Feeling (TF), and Judgment-Perception (JP). For more details about the description of the four separate categories see Smail and Jaafar (2007). These four items are the result of combining eight possible personality factors; when combined in totality, these eight factors result in 16 distinct personality types: ISTJ, ESTJ, ISFJ, ESFJ, ISTP, ESFP, ISFP, ENTJ, INTJ, ENTP, INTP, ENFJ, INFJ, ENFP, and INFP.

A lot of information is present on the implications and interpretation of the personality types developed from the MBTI results. The oldest and most highly regarded of these were *Please Understand Me* (Keirsey & Bates, 1984) and *Gifts Differing* (Myers & Myers, 1995). Myers' writing comprises personal observation and anecdotal evidence in a genuine and balanced manner. It consists of an exploration into the applications of personality types from education to career choice to mating. However, the writing was not able to provide substantiating evidence. On the other hand, Kiersey delves into the implications of the personality types, links these to interpersonal communication, and explains the 16 types. The revised work comprises the role of intelligence in shaping the overall personality of an individual.

Similarly, LaTorre (1995) provides a brief overview of the types of personality and discusses its implications for the education sector. As far as the education sector is concerned, the primary area for implementation of personality-type theory so far is to determine the best ways in which teachers can alter their teaching instructions and behaviors to improve the students' learning. Fisher and Kent (1999) asked teachers to look into their own personalities to manage, predict, and respond to student's response to the teaching style.

Golay (2002) asserts the same by motivating teachers to pay attention to the gaps in their personalities and to be informed when they are in contact with a student from a different personality type. He has further suggested a system in which a teacher can categorize the students, and both are able to understand each other. This system can easily help the teacher to classify students in different personality types and thus help with improved learning practice.

#### 3. Bayesian networks

Bayesian networks are graphical models represented by a directed acyclic graph where the nodes are the variables of the domain and the links show the dependency among the variables. For more details about Bayesian networks see (Smail & Jaafar, 2007).

The parameters of the Bayesian network (BN), in addition to the graph structure, are conditional probability distributions (CPD) at each node. In our case of discrete probability distributions, we will have, for each node, a conditional probability table (CPT), which lists the probability that each node takes on each of its different values for each combination of values of its parents in the graph.

Consider the example in Figure 1 called the student's letter, from Koller and Friedman (2009). In this example, a student is taking a course for a grade (G) that depends not only on his intelligence (I) (non-smart or smart) but also on the difficulty (D) of the course (easy or hard course).

The student has taken the SAT (S), so he may or may not have scored well, depending on his intelligence (low score or high score). We have also the recommendation letter (L) that the student gets from the instructor of the class. As the instructor does not remember all students and names, he will use the student's grade to write the letter (it could be a weak recommendation letter or a strong recommendation letter).

Thus, this Bayesian network consists of five random variables: grade, intelligence, difficulty, letter, and SAT. The edges between the variables represent direct influence of one variable on another. The two variables course difficulty and the student's intelligence are independent of each one another. To each variable, there is a probability table or conditional probability table associated. All variables are binary random with two values, except for grade we have three values:  $g^1$ ,  $g^2$ ,  $g^3$  that stands for excellent, good, average.

For example, there is a 60% chance that the course is easy, and a probability of 30% that the student is smart. If the course is easy and the student is smart, there is a chance of 90% of obtaining excellent as the grade. And so on; all these probabilities can be read for the provided tables in Figure 1. Figure 1. Example of a Bayesian network called "The Student's Letter."



Because of the independence among these variables, the probability of the Bayesian network P(D, I, G, S, L), the joint probability of all the five variables, can be written as:

#### P(D, I, G, S, L) = P(D)\*P(I) \* P(G|D, I)\*P(L|G)\*P(S|I).

Using the above Bayesian network, we will be able to answer any question related to any student in the same case. If we consider a new, incoming student, we may ask how likely it is for this student to get a strong recommendation letter from his instructor, knowing nothing about his grade nor the course he is taking. With simple allocation to the inference task on the Bayesian network below, we are able to calculate that this probability is 50.2%.

The idea behind using BNs is that because they have a powerful formalism for representing and reasoning under conditions of uncertainty, they also have graphical representations useful to explain models and help interactions with experts in other fields (non-statisticians). In addition, they are easy to run, and can provide precise numerical results in a small amount of time, especially when dealing with numerous variables.

#### 4. Study

#### 4.1. Research questions

The purpose of the study is to determine if there is/are relationship(s) among the personality types for students enrolled in an American institution *in Jordan*, their background and other factors related to their choice of this institution, and also their opinion about the teaching styles applied in this university.

#### 4.2. Sample

The accessible population was 508 students enrolled in different majors, *business, computer science, computer graphics, management, marketing, and accounting and from different year levels freshmen, sophomores, juniors, and seniors* during the Fall 2011 semester at an American institution *in Jordan.* Of these 508 students, 160 were males and 348 were females, they were arbitrarily chosen from various classes directed by numerous teachers. Students were informed about the study and given the chance to ask for clarifications before choosing whether to participate or not. Students who accepted to take part in the study acknowledged that by signing a consent form. There was no

incentive for taking part in the study and no penalties for not participating. The language used for the study was the same as instruction language in the institution which is English, in fact no other language was allowed in the institution.

#### 4.3. Method and instruments

The research study was done in two steps. The first step was to determine the personality types using the Myers-Briggs Type Indicator (MBTI). Participating students agreed to have their personality profiles assessed using the MBTI. They were given as much time as needed to complete the MBTI, which was administered to all students accepted to participate in this study.

The second step was a questionnaire that we developed addressing different factors related to the study:

- (1) What is your age?
- (2) What is your qualification?
- (3) How many years have you studied in English?
- (4) Have you studied in a language other than English?
- (5) Is this your first time in an American university outside the United States?
- (6) Have you studied in the United States?
- (7) To what extent do you think the standards applied in this university are similar to those applied in the United States?
- (8) Do you recommend studying in an American university outside the United States?
- (9) Which do you prefer: American teaching method, Arabic teaching method, Customized teaching method.
- (10) For what reason have you chosen to study in an American university outside the United States?
- (11) If you get offered a scholarship to the United States, will you accept it?
- (12) Rank your university.

#### 4.4. Data collection

Each student was identified by a five-digit ID number for confidentiality. At the end of the experiment, the data were arranged in 508 rows, one per student, and 15 columns *(including the ID number)* for the following 14 variables:

- (1) Personality Types: a discrete categorical variable that indicates the personality type for each student using the MBTI.
- (2) Age: a discrete categorical variable: less than 20, 20 to 25 years old, 25 to 30 years old, or more than 30 years old.
- (3) Gender: a discrete categorical variable: Male or Female.
- (4) Qualification: a discrete categorical variable: American High School Diploma, Local High School Diploma, or Other.
- (5) Years of study in English: a discrete categorical variable: 1–5, 5–10, 10–15, or More than 15 years.
- (6) Other language: a discrete categorical variable: Yes or No.
- (7) First Time in an American University outside the United States: a discrete categorical variable: Yes or No.
- (8) Advice studying in the United States: a discrete categorical variable: Yes or No.

- (9) Standards: Standards applied in this university are similar to those applied in the United States: a discrete categorical variable: 0, 20, 25, 30, 40, 50, 70, 75, 80, or 100%.
- (10) Recommend studying in an American university outside the United States: a discrete categorical variable: Yes or No.
- (11) Preferences: a discrete categorical variable: American teaching method, Arabic teaching method, or Customized teaching method.
- (12) Reasons: Reason for choosing to study in an American university outside the United States, a discrete categorical variable: Easier and more flexible, Educational, Location, Political, or Sociocultural.
- (13) Scholarship to the United States: a discrete categorical variable: Yes or No.
- (14) University rank: a discrete categorical variable: Poor, Fair, Good, Very Good, or Excellent.

#### 4.5. Descriptive statistics

In this study, there were 348 male respondents (68.5%) and 186 females (31.5%). The age variable had most of the respondents (62.2%) in the range of 20 to 25 years old; this is because the study was conducted on university students. After this age bracket, 168 students (33.1%) were less than 20 years of age, followed by 20 students (3.9%) from age 25 to 30, and only 4 (0.8%) were above 30 years old.

For the personality-type variable, the highest number of students (80 students) were of type "ESTJ," followed by "ESTP" (52 students), "ISTJ" with 48 students, "ISTP" and "ENTP" and "INTP" with 40 students each, then "ISFP" (36 students), "INTF" and "ESJF," each with 32 students, "ISFJ" with 28 students, "ESFP" and "ENFP" each with 20 students, "INFP" with 16 students, "INFF" with 8 students, and "ENFJ" with only 4 students (details in Table 1).

Table 1 also reveals that the typical university student was more Extrovert, Sensing, and Thinking (25.9%). In addition, 66% of the students were Sensing, while 43.2% of the Sensing students were of the Thinking type.

| Table 1. Descriptive statistics of the personality-type variable |           |         |  |  |  |  |
|--|-----------|---------|--|--|--|--|
| Personality type   | Frequency | Percent |  |  |  |  |
| ESTP   | 52        | 10.24   |  |  |  |  |
| ESTJ   | 80        | 15.75   |  |  |  |  |
| ESFP   | 20        | 3.94    |  |  |  |  |
| ESFJ   | 32        | 6.30    |  |  |  |  |
| ENTP   | 40        | 7.87    |  |  |  |  |
| ENTJ   | 12        | 2.36    |  |  |  |  |
| ENFP   | 20        | 3.94    |  |  |  |  |
| ENFJ   | 4         | 0.79    |  |  |  |  |
| ISTP   | 40        | 7.87    |  |  |  |  |
| LTSI   | 48        | 9.45    |  |  |  |  |
| ISFP   | 36        | 7.09    |  |  |  |  |
| ISFJ   | 28        | 5.51    |  |  |  |  |
| INTP   | 40        | 7.87    |  |  |  |  |
| INTJ   | 32        | 6.30    |  |  |  |  |
| INFP   | 16        | 3.15    |  |  |  |  |
| INFJ   | 8         | 1.57    |  |  |  |  |

| Table 2. Descriptive statistics of the years studied in English variable |           |         |  |  |  |  |
|--|-----------|---------|--|--|--|--|
| Years studied  | Frequency | Percent |  |  |  |  |
| 1 to 5 years   | 92        | 18.1    |  |  |  |  |
| 5 to 10 years  | 100       | 19.7    |  |  |  |  |
| 10 to 15 years   | 108       | 21.3    |  |  |  |  |
| More than 15 years   | 208       | 40.9    |  |  |  |  |

The qualification variable had most of the students (40.2%) in the category "Non-American and Non-Local High School Diploma" followed by 30.7% of the students in the category "Local High School Diploma," while 29.1% of the students had American high school qualification.

From a total of 508 students, 40.9% had studied in institutions where English was the means of instruction for more than 15 years. From the remaining students, 21.3% had studied in English from 10 to15 years, 19.7% of the students had studied in English from 5 to 10 years, and 18.1% had studied in English for only 1 to 5 years (see Table 2).

As the table shows, 67.7% of the students had studied in another language than the English language. A smaller percentage, 32.3% of the students, had studied only in English.

When students were asked if it was their first time at an American university outside the United States, most of them (87.4%) replied yes, whereas 12.6% replied No. This indicates that the sample selected for this study had both type of students, with the majority being those who had their first experience with an American university outside the United States. In response to this question, 18.9% students replied yes and the majority (81.1%) said that they had not studied in any university in the United States.

A majority of students (55%) believe that their *American university* follow only 50% of the standards applied by American universities in the United States. In their response, 9% said American universities in the Middle East do not follow any American standards, while 6.7% believed that the American universities in the Middle East follow 100% the standards followed by American universities in the States. A relatively small 3.9% believed that only 75% of the standards are met and another 3.9% believe that 40% of the standards are met. Finally, 3.2% believed that only 25% of the standards are met (Table 3).

When students were asked about recommending their university, 77.2% of the students responded positively, whereas 22.8% did not recommend studying in an American university outside the United States.

| Table 3. Descriptive statistics of the standards variable |           |         |  |  |  |  |
|---|-----------|---------|--|--|--|--|
| Percent standard followed                                 | Frequency | Percent |  |  |  |  |
| 0.00  | 46        | 9.0     |  |  |  |  |
| 0.20  | 24        | 4.7     |  |  |  |  |
| 0.25  | 16        | 3.2     |  |  |  |  |
| 0.30  | 16        | 3.2     |  |  |  |  |
| 0.40  | 20        | 3.9     |  |  |  |  |
| 0.50  | 280       | 55.1    |  |  |  |  |
| 0.70  | 36        | 7.1     |  |  |  |  |
| 0.75  | 20        | 3.9     |  |  |  |  |
| 0.80  | 16        | 3.2     |  |  |  |  |
| 1.00  | 34        | 6.7     |  |  |  |  |

## able 3. Descriptive statistics of the standards variable

| Table 4. Descriptive statistics for the reasons variable |           |         |  |  |  |  |
|--|-----------|---------|--|--|--|--|
| Reasons  | Frequency | Percent |  |  |  |  |
| Easier   | 120       | 23.6    |  |  |  |  |
| Educational  | 260       | 51.2    |  |  |  |  |
| Location   | 76        | 15.0    |  |  |  |  |
| Political  | 20        | 3.9     |  |  |  |  |
| Sociocultural  | 32        | 6.3     |  |  |  |  |

| Table 5. Descriptive statistics of the rank variable |           |         |  |  |  |  |
|--|-----------|---------|--|--|--|--|
| Rank   | Frequency | Percent |  |  |  |  |
| Poor   | 15        | 2.9     |  |  |  |  |
| Fair   | 104       | 20.5    |  |  |  |  |
| Good   | 201       | 39.6    |  |  |  |  |
| Very good  | 144       | 28.3    |  |  |  |  |
| Excellent  | 44        | 8.7     |  |  |  |  |

When students were asked about their preferred teaching methods, 69.3% of them choose an American teaching method, whereas 148 or 29.1% of them preferred customized teaching methods, and only 1.6% favored Arabic teaching methods.

For the reason variable, 120 students believed that it is easier to get admission to an American university outside the United States, while 260 declared that they chose these universities for educational purposes. Of the students, 76 believed that the location suits them and 20 students choose the American university for political reasons (see Table 4 for details).

A majority of students (49.6%) ranked their university as "good," 28.3% ranked the university as "very good," 8.7% ranked the university as "excellent," and a mere 13% ranked their university as "poor" (see Table 5 for details.)

When asked about scholarships, a majority of students (89%) said they would accept a scholarship to the United States if offered one.

#### 5. Results and findings

#### 5.1. Linear regression

The research variables were merged into four main categories, and personality type was kept as the separate independent variable. Age, gender, and qualifications were grouped into one category called "Demographics." Years studied in English and Other language variables were grouped under the "Language" category. First time studying in an American university outside the United States, recommend studying in an American university outside the United States, and have studied in an American university in the United States were grouped under "Preference." Local university ranking, methods applied in the local American university are similar to the one allied in the United States, would avail scholarship to the United States if offered, and reasons to select an American university outside the United States were grouped under the umbrella of one independent variable named "Reasons."

Regression analysis was conducted by keeping "Extent to which local standards are same/similar to the ones applied in the States" as a dependent variable and Demographics, Reasons, Personality Type, Language, Standards, and Preference as independent variables.

The regression equation is given by the follow equation:  $Y = \alpha + By$ 

When applied to this study, the equation becomes:

$$\mathsf{Ext} = \mu + \beta_1 \mathsf{RS} + \beta_2 \mathsf{DM} + \beta_3 \mathsf{PT} + \beta_4 \mathsf{L} + \beta_5 \mathsf{PG} + \mu$$

where  $\alpha$  = Constant

*B* = coefficient (change in dependent variables due to independent variable)

Ext = "Extent to which local standards are same/similar to the ones applied in the States"

RS = Reasons to choose American universities outside the United States

DM = Demographics of students

PT = Personality type

L = Language of study

PG = Preference given.

The regression analysis summarized by the following Tables 6-8.

| Table 6. Model summary |       |                       |                         |                            |  |  |
|------------------------|-------|-----------------------|-------------------------|----------------------------|--|--|
| Model                  | R     | <b>R</b> <sup>2</sup> | Adjusted R <sup>2</sup> | Std. error of the estimate |  |  |
| 1                      | 0.278 | 0.077                 | 0.068                   | 2.149                      |  |  |

| Table 7. ANOVA table |            |                |     |             |       |      |  |
|----------------------|------------|----------------|-----|-------------|-------|------|--|
| Model                |            | Sum of Squares | Df  | Mean Square | F     | Sig. |  |
| 1                    | Regression | 193.611        | 5   | 38.722      | 8.385 | .000 |  |
|                      | Residual   | 2318.145       | 502 | 4.618       |       |      |  |
|                      | Total      | 2511.756       | 507 |             |       |      |  |

| Table 8. Coefficients of the regression model |                             |            |                              |        |       |  |  |  |
|---|-----------------------------|------------|------------------------------|--------|-------|--|--|--|
| Model   | Unstandardized coefficients |            | Standardized<br>coefficients | t      | Sig.  |  |  |  |
|   | В                           | Std. error | Beta                         |        |       |  |  |  |
| (Constant)                                    | 5.820                       | 0.824      |                              | 7.060  | 0.000 |  |  |  |
| Language                                      | 0.430                       | 0.110      | 0.172                        | 3.909  | 0.000 |  |  |  |
| Preference given                              | 0.155                       | 0.290      | 0.023                        | 0.534  | 0.594 |  |  |  |
| Reasons                                       | -0.254                      | 0.071      | -0.154                       | -3.575 | 0.000 |  |  |  |
| Personality type                              | 0.072                       | 0.021      | 0.152                        | 3.515  | 0.000 |  |  |  |
| Demographics                                  | -0.249                      | 0.160      | -0.069                       | -1.557 | 0.120 |  |  |  |

| Table 9. Conditional probability table of reason given personality type |        |             |          |           |               |  |
|---|--------|-------------|----------|-----------|---------------|--|
| Personality Type  | Easier | Educational | Location | Political | Sociocultural |  |
| ENFJ  | 0.000  | 100.000     | 0.000    | 0.000     | 0.000         |  |
| ENFP  | 20.000 | 60.000      | 0.000    | 0.000     | 20.000        |  |
| ENTJ  | 0.000  | 100.000     | 0.000    | 0.000     | 0.000         |  |
| ENTP  | 20.000 | 60.000      | 20.000   | 0.000     | 0.000         |  |
| ESFJ  | 12.500 | 50.000      | 25.000   | 12.500    | 0.000         |  |
| ESFP  | 20.000 | 40.000      | 20.000   | 0.000     | 20.000        |  |
| ESTJ  | 35.000 | 50.000      | 0.000    | 0.000     | 15.000        |  |
| ESTP  | 30.769 | 53.846      | 7.692    | 0.000     | 7.692         |  |
| INFJ  | 50.000 | 50.000      | 0.000    | 0.000     | 0.000         |  |
| INFP  | 25.000 | 25.000      | 50.000   | 0.000     | 0.000         |  |
| INTJ  | 25.000 | 25.000      | 37.500   | 12.500    | 0.000         |  |
| INTP  | 0.000  | 60.000      | 20.000   | 10.000    | 10.000        |  |
| ISFJ  | 14.286 | 42.857      | 28.571   | 14.286    | 0.000         |  |
| ISFP  | 33.333 | 44.444      | 11.111   | 11.111    | 0.000         |  |
| ISTJ  | 33.333 | 58.333      | 8.333    | 0.000     | 0.000         |  |
| ISTP  | 20.000 | 50.000      | 20.000   | 0.000     | 10.000        |  |

In light of the above-obtained results from running SPSS, our regression equation comes out to be:

#### Ext = 5.820 - 0.254RS - 0.249DM + 0.072PT + 0.43L + 0.155PG + 2.149

With  $R^2 = 0.278$ .

This means the 27.8% change in the dependent variable is due to the selected independent variables. In this particular case, change in "Extent to which local standards are same/similar to the ones applied in the States" is explained by "Reasons to choose American universities outside the United States," "Personality type," "Language of study," "Demographics," and "Preference."

Among these independent variables, personality type, preference given, and language are positively associated with the dependent variable "Extent to which local standards are same/similar to the ones applied in the States," whereas "Demographics" and "Reasons" variables are negatively associated with the dependent variable.

#### 5.2. Bayesian networks approach

We will now use Bayesian networks as a tool to find possible probabilistic relationships among the variables of interest. To do so, we used BayesiaLab as a Bayesian network software (www.bayesia. com).

We first looked at a possible direct influence between personality type and reason for studying in an American *university in Jordan*. We obtained a connection, as shown in Figure 2.

The conditional probability distribution associated to the variable Reason conditioned on the variable personality type is given in Table 9

When fixing the variable reason to educational, the personality-type probability for extrovert barely changes, but it changes for introvert students. If reason is fixed to location, in other words, P(Reason = Location) = 100%, the probability of extrovert and introvert changes dramatically as it can be seen in Figure 3.



The probability of extrovert went down to zero for ENFJ, ENFP, ENTJ, ESTJ, and INFJ. A majority of the Extrovert, Intuitive, and Judging students did not choose the university because of its location, which is a perfect match knowing their personality types and the way they think. The probability of the majority of the Introvert students rose conditional to the information that the reason is mainly about the location of the university. The introverts do not like to interact with the outside world, which makes perfect sense in this case.

We also looked also at a possible relationship between the two variables gender and the reason for attending an American university in an Arabic country, producing the graph in Figure 4.

The conditional probability distribution associated with the variable Reason conditioned on the variable Gender is given in Table 10.



Figure 4. Bayesian network relating gender and reason.

| Table 10. Conditional probability table of reason given gender |        |             |          |           |               |  |  |
|--|--------|-------------|----------|-----------|---------------|--|--|
| Gender   | Easier | Educational | Location | Political | Sociocultural |  |  |
| Female   | 22.500 | 50.000      | 17.500   | 2.500     | 7.500         |  |  |
| Male   | 24.138 | 51.724      | 13.793   | 4.598     | 5.747         |  |  |

If we assume that Gender = Female, this increases the probability of Reason = Educational from 14.8 to 17.5%. When Gender = Male, P (Reason = Educational) decreases from 14.9 to 13.8%. This has to do with the Arabic culture, as it is much easier for a male student to travel abroad to study.

The last Bayesian network looked at possible relationships between a subset of variables of the study that can be seen in Figure 5.

The probability of each of the values is shown in Figure 6.

Of the students, 59% declared that the standards followed by their *their* American institution *in Jordan* are less than 50% of the American standards, and about 29% thought that the following of standards are only 30% of the American standards. A majority of the students were aged between 20 and 25 years, which makes attending *this American university in Jordan* a great opportunity. This explains the fact that 77% of the students recommended *their institution*.

When the qualification was fixed to American high school, the probability of "*Reason* = *Location*" went up from 14.9% to almost 19%. When we looked at those students, we found that the majority were from Arabic families that returned to their home country and brought their children who could not go back to the United States to finish their studies.

In contrast, fixing the qualification to local high school, Tawjihi, increased the probability of reason = educational to almost 59% (from 51%).





Figure 6. Probabilities of the variables in the above Bayesian network.



#### 6. Discussion

The results indicate that the majority of Arab students 69.3% preferred the American style of teaching, then Arabic teaching methods. This finding supports (Benard, 2006) that American education is considered to have higher standards than Arabic education. Arab students are inclined to pursue an American education due to its pedagogy and opportunities for career advancement. Therefore, universities that adopt the American style of teaching may benefit in student enrollment. Faculty recruitment can also focus on hiring faculty that received a Western style education.

Arab students believe that 59% of American universities follow 50% of American standards within the United States. Therefore, the perception that Western institutions meets the learning objectives coincides with receiving an American education. These results support Liu et al. (2014) that American universities rely on critical thinking. Arab students are interested in receiving an education that will benefit them for the workforce and that meets international standards.

According to the data, 120 students believed that it is easier to get admitted to an American university outside the United States. In addition, majority of the students were more inclined to choose universities for educational purposes. This supports Kabir et al. (2016) that students are interested in seeking degrees from American universities. Students in the Middle East may not be able to travel to the United States because of family or religious purposes. Students obtaining degrees from American universities may help them on getting jobs and improve their career outlook.

#### 7. Conclusion

The image of private universities in the ME, where the majority are American, is made around the high cost and that the admissions standards are lower compared to other local universities. When such universities go through the accreditation process things change a bit.

Most of the students agreed on the fact that studying at an American university is a great opportunity to learn English. Not to mention that for non-Arabs or Arabs returning from the United States and living in the Middle East, joining an American university is the only option they have. The majority of the students agreed on the fact that American-style education teaches them how to think rather than how to memorize. The American teaching style has an overwhelming taste and style and it is easier, making students more likely to study. In contrast, it seems that the Arabic teaching method is based on memorization and not on self-thinking and developing argumentation. Thus, in general, Educational (51.18%) was the main reason students (Arabs and non-Arabs) chose to join *this* American university *in Jordan*, followed by Easier (23.62%), and finally, Location (14.96%). It was found that 59.06% of the students think that the applied standards in *this* American institution are less than 50% of those applied in the States. About 20% of the students think that those standards are even less than 30% of those of the US standards.

The study also revealed that personality type plays a major role for students in deciding to join an American university in their Arabic country. There were a clear and obvious difference in decisions made between introvert and extrovert types.

As to faculty members who came from everywhere, they love working for American Universities in the ME because they feel that they have the advantage of working with an American education system as well as enjoying the local and indigenous flavor. American universities are trying to employ faculty members from America most of the time, but the fact remains that the highest percentage of faculty are local, or local people who finished their PhDs in the States but had no teaching experience *in the US* This fact also undoubtedly affects teaching styles in these American universities. Future *research will* look at this issue from the faculty point of view.

Understanding faculty perceptions on American universities in the Middle East can provide information on their teaching styles and help to understand what methods work on teaching Arabic students. The literature suggests notions that American universities are better in helping students with critical thinking skills. However, there is minimal to no data to determine if this holds true. It would be interesting to conduct a comparison between an Arabic University and an American University among faculty and students to understand if there are any differences in perception of quality of education. In addition, we would also like to look at how the conflict in Iraq and Syria has impacted the American institutions in the ME. Civil wars and political instability can also affect American institutions in the Middle East in terms of student enrollment and faculty job security.

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