The American Model of the Research University: A Factor Analysis of Arab Gulf and American Student Perceptions

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Introduction

The challenges imposed by internationalization and globalization trends in higher education—in particular that of escalating competitiveness—are forcing higher education institutions worldwide to look for models to respond (Schoorman 2000; Parsons and Fidler 2005; Yao 2009; Agnew 2010; Matta 2010). The effects of globalization have been studied, mainly, from a corporatization perspective (Kleypas and & McDougal 2012) and have used classic economic and academic capitalism theories (Walker 2009), and administrative theoretical frameworks (Barrow, Didou-Aupetit, and Mallea 2003). Such views have contributed to the widespread adoption of a business model of the university that emphasizes knowledge production and the view of education as a commodity (Murphy 2006; de Wit 2011).

A common response is the adoption, and in some cases the local adaptation, of the American model of the research university (AMRU) [a model that has its roots in the United Kingdom and is employed in Australia, so it is also referred to as the Anglo-Saxon model of the research university (Teichler 1998; Wanger, Azizova and Wang 2009; Wang and Wanger 2011)]. The Bologna Accord, signed by 40 European countries, for example, utilizes the model as the base in an attempt to homogenize higher education degrees and to harmonize standards in Europe (Finn 2007).

Within the Arab Gulf region, efforts to emulate the research university model are well documented (Obst and Kirk 2010). In this region, also referred to as Al Khaleej region within the Arab World, reforming and modernizing higher education to create knowledge-based societies is ongoing (Obst and Kirk 2010). The Gulf Cooperation Council (GCC)—composed of the countries of Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates—shares a regional vision to make the Arab Gulf region a hub for world-class education (The Cooperation Council of the Arab States of the Gulf 2014). Arab higher education systems that were long characterized by mass production of undergraduate programs and graduates, as well as incremental support of the state, are shifting to new Western models. Several factors, as Adrian Acosta-Silva (2000) states—including the development of the knowledge economy, massive access to higher education, and increasing higher education differentiation—contribute to a push for universities to transition quickly and, in many cases, without certainty toward new models. To achieve the vision the AMRU is widely adopted (Mazawi 2010). The model also is embraced through the large number of GCC students studying in American universities. According to the 2015 Open Doors annual report, Saudi Arabia and Kuwaiti are ranked as two of the top twenty-five places of origin of international students studying in the United States. The report also notes that there is a steady and notable increase in the number of Arab Khaleeji students studying in the United States. The growing number within the region of Western branch campuses further attests the strength of the model. André Mazawi (2010) also asserts that "Gulf educational policies are drawn mainly into the orbit of American and British educational policy making through the active involvement of think tanks and consultants" (p. 215). These educational policy reforms have significant implications. For example, policy borrowing from the global center

represented by the U. S. and the U. K. links the GCC States to educational systems of Western countries. This kind of partnership implies Arab Gulf dependency on policies and strategies foreign to the region for the sake of achieving international competitiveness status. For Gari Donn and Yahya Al Manthri (2010), "this is not 'policy borrowing' but rather 'cultural replacement'" (p. 24). Thus, the impact of the AMRU on Arab Gulf students can be significant. This study accordingly assesses the perceptions of Arab Gulf students of the AMRU and compares them to the perceptions of American students.

Conceptual Framework

The conceptual framework for this study is based on a composite model that characterizes the American research university as developed by multiple researchers (Teichler 1998; Arthur, Brennan and de Weert 2007; Finn 2007; Gill 2008; Wanger, Azizova, and Wang 2009; Yao 2009; Arthur and Little 2010; van Santen 2010; Wang and Wanger 2011). The composite model comprises six key characteristics: 1) using of English as the lingua franca, 2) having a relatively fixed structure of academic programs, 3) having a flexible curriculum and a growing stratification of programs/institutions, 4) promoting autonomy and decentralization of higher education, and 5) integrating research into higher education. In addition to these five elements, and also derived from the literature review on this theme, an element conceptualized as "Understanding of knowledge as national capital" was also explored in this study to gain insight on its perceived value. These six key elements of the AMRU were conceptualized as follows:

1. Use of English as lingua franca (ELF). This element refers to the increasing use in higher education of English as the primary language of instruction, academic materials, and publication of research (Zierer 1974; Mauranen 2003; Baker 2009; Wanger, Azizova and Wang 2009; Bjorkman 2010, 2011a, 2011b; Mauranen, Hynninen and Ranta 2010; "The pragmatics of English as a lingua franca in the international university: Introduction 2011; Wang and Wanger 2011; Smit 2012; Hevey 2013; Wilkins and Urbanovic 2014).
2. Structuring of academic programs in three tiers (SAP). This element is defined as the structuring of academic programs that incorporate a three or four-year bachelor degree program, a two-year master program, and a three five-year doctorate degree (Montoya 2004; Wanger, Azizova and Wang 2009; Wang and Wanger 2011; Leake 2013).
3. Flexibility of curriculum and growing stratification of programs and institutions (FSP). This element refers to the increasing flexibility of graduate curriculum and higher education programs, a greater institutional flexibility that allows students to transfer between institutions, and the increasing preeminence of university rankings in students' decision to pursue a program at a given institution (Ross 1977; Acosta-Silva 2000; Wang 2004; Bougnol and Dulá 2006; Bastedo, Jaquette, and Harris 2009; Wanger, Azizova and Wang 2009; Aboites 2010; Wang and Wanger 2011; Davies and Zafira 2012; Leake 2013; Knutson, Jackson, Beekman, Carnes, Johnson, Johnson, and Keszler 2014).
4. Promotion of autonomy and decentralization of higher education (PAD). This element denotes the promotion in higher education of students' autonomy in learning and scholarly work, as well as the governmental decentralization of higher education, that allows institutions a greater autonomy to deliver education services and to grant degrees with minimal legal regulations (Ross 1977; Brown 1990; Acosta-Silva 2000; Merino Juarez 2000; Larson 2003; Eaton 2009; Wanger, Azizova and Wang 2009; Aboites 2010; Overall, Deane, and Peterson 2011; Wang and Wanger 2011; Leake 2013; O'Donnell, Chang, and Miller 2013).
5. Integration of research into higher education (IRH). This element refers to an increasing emphasis in higher education programs on the production and publication of scholarly research

(Acosta-Silva 2000, 2002; Wanger, Azizova and Wang 2009; Aboites 2010; Wanger 2011; Leake 2013; Knutson et al., 2014).

6. Understanding of knowledge as national capital (KNC). This element is characterized by the growing emphasis in higher education on the understanding and the promotion of knowledge as a private good that serves for personal and national economic advancement (Alexander 2000; Lynch 2006; Wanger, Azizova and Wang 2009; Cucchiara, Gold and Simon 2011; Taylor and Judson 2011; Wang and Wanger 2011; Davies and Zafira 2012; Judson and Taylor 2014; Sellar and Lingard 2014).

This six-fold conceptual model provided the lens through which the study was both conducted and analyzed.

Methodology

The purpose of this study was to explore the values of Arab Gulf and American undergraduate students regarding core elements of the AMRU and to compare and contrast these values. Q methodology was used to determine extant views between and among two groups of undergraduate students enrolled at a public research university in central United States. The results indicate the presence of at least three predominant views of the model among Arab undergraduate students as well as three predominant views among American undergraduate students. The predominant views for both groups suggest that students view higher education primarily as a tool for economic advancement. The results suggest that students' views are aligned with the global trend that frames higher education as a private good.

Q Methodology

Q is a systematic methodology that utilizes a sorting technique and a combination of research methods to identify factors or subjective views that groups of individuals hold of a given issue (McKeown and Thomas 1988, 2013; Brown 1993; Watts and Stenner 2012). This methodology has been used widely in the behavioral sciences and related fields for over eight decades (Watts and Stenner 2012; McKeown and Thomas 2013). Q methodology is increasingly used in higher education to explore the perceptions of students and personnel. Q was recently explored for the study of the subjectivity of university students and faculty members on issues such as media access and use (Riggs 2011), emotion in the higher education workplace (Woods 2012), and sustaining college students' resiliency (Seaman 2014). Q correlates individual perceptions of participants (sorts) to determine if groups of participants (factors) sharing similar perspectives exist. Therefore, Q was determined as the methodology that best served the purpose of identifying the existence of different viewpoints of the AMRU between and among the groups of undergraduate students that participated.

Sites

Data for this study were collected at an American Public University (APU) during the 2015 spring and fall semesters. APU is a comprehensive institution located in a rural area that grants bachelor, master, and doctoral degrees in most knowledge areas. A total of 30 participants, 15 American and 15 Arab students comprised the P-sets. Approval to conduct research with human subject was granted by the institution to which the researchers are affiliated. Data from both groups of students were obtained individually on diverse campus locations. All students volunteered to participate and received no compensation.

Participants

Purposive snowballing was used to select participants. The only criteria established by the researchers was that students were classified as undergraduate students and matriculated from either the Arab Gulf or the United States. American participants included 11 females and 4 males. Their ages ranged from 18 to 25, with an average of 20. Ten of the participants self-identified as white, one as Hispanic, two as American Indian, and two as multi-ethnic. Their number of university semesters in undergraduate programs ranged from 1 to 13, with an average of 5. All participants in this group were students in education related fields. Arab participants included 2 females and 13 males. Their ages ranged from 20 to 30 years old, with an average of 23. All participants self-identified as citizens from an Arab country. Their number of university semesters in undergraduate programs ranged

from 4 to 11, with an average of 7. Fourteen participants in this group majored in engineering and one was a science major.

Instrument

The instrument for data collection included a set of 36 paper squares (Q-set) containing statements related to the six elements of the AMRU. Table 1 includes the 36 statements (six per element). These were numbered randomly to avoid interfering with the rank-order that students were asked to conduct. The same set of statements in English was used for both groups of participants because all participants were fluent in English.

TABLE 1: *STATEMENTS ASSOCIATED WITH KEY ELEMENTS OF AMRU*

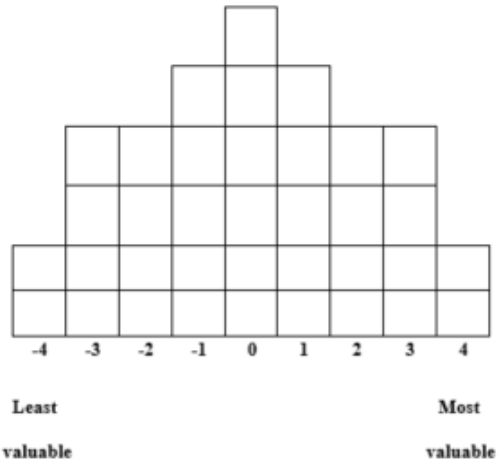
Random Number	Statement with Element Code	ASM Element
34	[ELF] Getting university instruction exclusively in English	Use of English as the lingua franca [ELF]
14	[ELF] Reading academic materials in English	
6	[ELF] Publishing in English	
19	[ELF] Not using materials in languages other than English	
26	[ELF] Improving my English proficiency	
8	[ELF] Studying in English speaking countries	
9	[SAP] Having a graduate degree	Structuring of academic programs in 3 tiers [SAP]
27	[SAP] Taking graduate courses	
2	[SAP] Studying a demanding program	
35	[SAP] Having incremental graduation requirements	
21	[SAP] Studying more than four years at a university	
15	[SAP] Following the bachelor-master-doctorate sequence	
28	[FCS] Studying a flexible university program	Flexibility of curriculum and growing stratification of programs/institutions [FCS]
10	[FCS] Being able to transfer from one institution to another	
22	[FCS] Taking distance learning classes	
3	[FCS] Taking courses without prerequisites	
16	[FCS] Conducting multidisciplinary work	
36	[FCS] Choosing a program based on university rankings	
17	[PAD] Developing independent learning	Promotion of autonomy and decentralization of higher education [PAD]
23	[PAD] Getting a degree without government intervention	
4	[PAD] Studying a program that has minimal legal regulations	
11	[PAD] Studying at a university with little bureaucracy	

29	[PAD] Getting preparation to be autonomous	
32	[PAD] Completing administrative processes easily	
18	[IRH] Conducting research in class	Integration of research into higher education [IRH]
24	[IRH] Improving research skills	
12	[IRH] Publishing research studies	
5	[IRH] Studying a program that emphasizes research over teaching	
31	[IRH] Writing a thesis or dissertation	
30	[IRH] Taking classes that integrate theory, research and practice	
7	[KNC] Creating new knowledge	Understanding of knowledge as national capital [KNC]
20	[KNC] Learning new knowledge in class	
33	[KNC] Studying to succeed economically	
1	[KNC] Acquiring knowledge that makes me more competitive	
25	[KNC] Getting preparation to be a professional leader	
13	[KNC] Obtaining a university degree to get a better job	

As Figure 1 demonstrates, the instrument also included two paperboards for students to glue their sorts onto, with a scale ranging from of a negative value of -4 to a positive value of +4.

FIGURE 1: PAPER BOARD WITH SCALE

Students were provided with glue-sticks. A brief survey was also attached to the boards to gather participants' demographic data, as well as their feedback on their sorting experience and/or on the Q-set. A record sheet was also added to the instrument for the researchers' use. The components of the instrument, except for the Q-set, were stapled altogether.



Data Collection

All participants were informed, in English, of the purpose of the study. Participants were informed that the set of paper squares contained statements regarding elements of higher education that the literature suggests are key; however, they were not informed that the statements belonged to the six elements. We did this to avoid confusion and interference in the sorting process. Students were instructed about the procedures to rank-order the Q-set and were invited to express any doubt about the procedure at any time during the sorting procedures. We communicated to participants that all written information provided on the different components of the instrument would both remain anonymous and would be destroyed at the completion of the study.

Procedures

All participants were asked to sort the set of statements (Q-set) twice using two different conditions of instruction. The conditions of instruction were given in participants' native languages. The first condition of instruction for all participants was to rank-order the Q-set according to the question, "What elements of my undergraduate education are valuable to me?" To complete the sorts students were asked to first separate the statements into three piles that represented high value, low value, or neutral value. Participants were informed that, due to methodological purposes, any statement that was not understandable to them or any statement that had conflicting values should be placed in the pile of statements that they considered of neutral value.

Participants were then asked to select the two pieces of paper containing the statements that were most valuable to them (from the pile of statements they had presorted as being of a high value) and glue them onto the column with the highest value (+4) of the paper boards. They were informed that the position within the column was not important because any statement in the column would have the same methodological value. Next, they were asked to select the two pieces of paper containing the statements that were least valuable to them (from the pile of statements they had presorted as being of a low value) and glue them onto the column with the lowest value (-4). They were asked to go back and forth to the piles and glue the statements from the outside columns to the center. They were informed that once they ran out of statements on any pile that they could use a statement in the neutral value pile and place it in any column according to their perceived value. They were also informed that they could change the position of statements among the piles or the columns if the wanted to, even if the statements were already glued onto the board.

After participants glued all statements onto the first board, we requested that they complete a second Q sort. This was done to capture if the higher education values they held for themselves differed from what they perceived were the values of others. Thus, the second condition of instruction for American participants was to rank-order the Q-set according to the question, "What elements of undergraduate education are valuable for American students?" For Arab participants the second condition of instruction was the same, "What elements of undergraduate education are valuable for American students?" Because the Arab participants in this study had firsthand experience both studying in the U. S. and interacting with American students, we asked this question to determine Arab students' views of the value of higher education held by American students. Participants followed the same procedures as they did for the first sort. After completing both sorts, participants were asked to provide anonymous demographic information and their feedback on sorting and/or on the Q-set.

Data Analysis

PQMethod was used to perform the Q methodological analysis of data. PQMethod is an access-free software widely used in Q methodology studies (available from http://schmolck.userweb.mwn.de/qmethod/). A first-order factor analysis was conducted for the 30 sorts for both groups to determine if participants in each group held more than one view of the AMRU. This meant: (1) creating a PQMethod project for each group, (2) entering the 30 sorts of each group in each project, (3) performing a principal components factor analysis and a Varimax rotation for each group, and (4) performing a final z-score calculation of the rotated factors. A three-factor solution resulted for each group indicating that participants in each group had three different views of the AMRU. A threshold of 0.45 significance (when rounded to two digits) was observed to flag manually the defining sorts for all nine views. These three factors are represented respectively for American and Arab students in Tables 2 and 3.

TABLE 2: *VALUES OF HIGHER EDUCATION FOR SELF AND OTHERS HELD BY AMERICAN UNDERGRADUATE STUDENTS*

		Factors			
	Q Sort	**1**	**2**	**3**	
1	AU_1	0.6480X	0.0968	0.4066	
16	AU_1_2	0.1930	-0.0064	0.6567X	
2	AU_2	0.2841	0.7318X	-0.0979	
17	AU_2_2	0.2930	0.7458X	-0.0577	Exemplar
3	AU_3	0.3765	0.2827	0.5235X	
18	AU_3_2	0.3519	0.1449	0.6941X	
4	AU_4	0.3886	0.3765	0.0480	
19	AU_4_2	-0.0864	0.6841X	-0.0689	
5	AU_5	0.5127X	0.1619	0.4223	
20	AU_5_2	0.1799	0.3746	0.4494	
6	AU_6	0.6700	0.0167	0.5284	
21	AU_6_2	0.5594	-0.1340	0.6845	
7	AU_7	0.6711X	0.2486	0.1304	
22	AU_7_2	-0.1118	0.2572	0.7321X	Exemplar
8	AU_8	0.7857X	0.1505	0.0749	Exemplar
23	AU_8_2	0.7324X	0.3806	-0.1542	
9	AU_9	0.5894X	0.2765	0.1465	
24	AU_9_2	0.1743	-0.1131	0.6907X	
10	AU_10	0.4419	0.7064X	-0.0611	
25	AU_10_2	0.1988	0.6486X	0.2005	
11	AU_11	0.0391	0.5592X	0.1773	
26	AU_11_2	0.0144	0.6673X	0.2266	
12	AU_12	0.4134	0.4220	0.5058X	
27	AU_12_2	0.2042	0.4777X	0.4074	
13	AU_13	0.6177X	-0.0595	0.2712	

28	AU_13_2	-0.0528	0.1134	0.6562X
14	AU_14	0.4936	0.2626	0.4584
29	AU_14_2	0.2780	-0.0402	0.6897X
15	AU_15	0.5784	-0.0082	0.5090
30	AU_15_2	0.7133X	0.2808	0.2557
% Expl. Var.		**20**	**15**	**19**
# Defining Sorts		**8**	**8**	**8**

TABLE 3: *VALUE OF HIGHER EDUCATION FOR SELF AND OTHERS HELD BY ARAB UNDERGRADUATE STUDENTS*

		Factors		
Q Sort		**1**	**2**	**3**
1	AR-1	0.0505	0.0313	0.7710X
16	AR-1-2	0.5714	0.4512	0.2418
2	AR-2	0.4378	0.1329	0.5178X
17	AR-2-2	0.0526	0.7516X	-0.1681
3	AR-4	0.3337	0.3201	0.6050X
18	AR-4-2	0.4542X	-0.3527	0.1747
4	AR-6	0.6763X	0.0301	-0.0453
19	AR-6-2	0.0648	0.6249X	-0.1150
5	AR-7	0.6446X	-0.0861	-0.0958
20	AR-7-2	0.3558	0.4853X	-0.3071
6	AR-10	0.7544X	-0.2377	0.1424
21	AR-10-2	0.1018	0.6734X	0.1864
7	AR-12	0.4055	-0.2228	0.6479X
22	AR-12-2	0.0633	-0.1489	0.8592X Exemplar
8	AR-13	0.5263X	0.1396	0.4185
23	AR-13-2	-0.4744	0.6054	-0.0555
9	AR-14	0.6235X	0.0660	0.2505

24	AR-14-2	0.4767X	0.4384	0.1558	
10	AR-15	0.6409X	-0.3000	0.1648	
25	AR-15-2	-0.1747	0.6929X	0.0238	Exemplar
11	AR-17	0.8174X	-0.0651	0.2376	
26	AR-17-2	0.5325X	0.1232	0.1430	
12	AR-18	0.7704X	-0.2262	-0.0043	Exemplar
27	AR-18-2	0.0751	0.2688	-0.0536	
13	AR-20	0.6006	-0.3288	0.4877	
28	AR-20-2	0.5354X	0.3825	0.1093	
14	AR-21	0.6693X	0.2107	0.1563	
29	AR-21-2	0.5701	0.5142	-0.0528	
15	AR-23	0.4231	-0.6351X	0.1432	
30	AR-23-2	-0.0449	0.6793X	0.1446	
% Expl. Var.		**24**	**17**	**10**	
# Defining Sorts		**14**	**8**	**3**	

Tables 4 and 5 highlight the correlation between factors for both groups.

TABLE 4: *CORRELATION BETWEEN FACTORS FOR AMERICAN STUDENTS*

Factors	1	2	3
1	1.0000		
2	0.4947	1.0000	
3	0.4716	0.2789	1.0000

TABLE 5: *CORRELATION BETWEEN FACTORS FOR ARAB STUDENTS*

Factors	1	2	3
1	1.0000		
2	0.2468	1.0000	
3	0.4684	0.3391	1.0000

Correlations between factors 1 and 2, and 1 and 3 of the American students, were fairly high at 0.4947 and 0.4716 respectively. Such strong correlations may be

explained in part by the number of consensus statements that are discussed in subsequent sections. A high correlation suggested at first that a homogeneous view among American students did exist. However, the low correlation between factors 2 and 3, and a deeper analysis of individual factors, suggested that American participants indeed held both strong and subtly different views. Correlation between factors 1 and 3 of Arab students was fairly high at 0.4684, also suggesting some degree of a shared view among some Arab participants. However, the fairly low correlation between factors 1 and 2, and 2 and 3, and a deeper analysis of individual factors, also suggested that Arab participants also held both strong and subtly distinct views at the time the study was conducted.

Factor arrays, distinguishing statements, consensus statements, statements' array positions, and z-scores were all used to interpret the views and values that participants held at the time the study was conducted. Factors were then named and characterized. The interpretation of the factors and their characterization is presented and discussed in subsequent sections.

Findings

Two groups of fifteen undergraduate students participated in the study (30 sorts). Each group of participants (American and Arab undergraduate students) sorted statements belonging to elements of the AMRU twice, resulting in 30 sorts for each group and a total of 60 sorts. For both groups, statistical loading charts showed that three factors were statistically significant in each group. Of the 30 sorts produced by the American group of undergraduate students, 24 sorts were defining and six were confounded at the 0.45 significance threshold. Eight defining sorts loaded on each of the three factors. This means that these three factors were statistically significant and that they were almost equally strong. Of the 30 sorts produced by the Arab group of undergraduate students, 23 sorts were defining and 7 were confounded. Seven sorts loaded on factor 1, and an equal number of 8 sorts loaded on factor 2 and factor 3. Analysis of these loading also indicated that the three factors identified by Arab students were statistically significant and reflected views that were almost equally strong.

Our focus was on analyzing and understanding all views of both groups of participants, as manifested by the factors particular to each group. Although the focus was on understanding positive and negative values, neutral views or views that had zero value on the array charts were also considered. It is worth noting, however, that neutrality toward certain statements could be attributed to a lack of understanding or the clarity of these statements.

The analysis of factors' arrays and statements' positions in the arrays indicated that students in both groups held clearly defined views of what is most valuable for them in their academic experiences as undergraduate students studying in American higher education institutions. Further analysis of factors' distinguishing statements and consensus statements among factors helped to characterize and to name each view in accordance to their value orientation. Three defining viewpoints characterized the participants in each group as follows:

American Undergraduate Students

The Market-Oriented

Students of this group of participants are best described as the competitors. They assigned significantly high positive values to all statements related to the core element of understanding knowledge as national capital. In addition, they were in favor of the autonomy and decentralization of higher education. However, they placed negative or neutral values on the use of English as lingua franca. Also, they did not care much about either learning or producing research or the flexibility of programs and the stratification of institutions. In addition, they were significantly neutral about the structuring of the academic programs that might or might not follow the traditional 3-tier academic system. Table 6 highlights these findings.

TABLE 6: *VIEWS OF AMERICAN STUDENTS: THE MARKET-ORIENTED GROUP*

Statement number	Element	Statement	Column position	z-scores
17	PAD	Developing independent learning	4	1.910
25	KNC	Getting preparation to be a professional leader	4	1.909
7	KNC	Creating new knowledge	3	1.858
20	KNC	Learning new knowledge in class	3	1.687
28	FSP	Studying a flexible graduate program	3	1.090
13	KNC	Obtaining a university degree to get a better job	3	0.945
36	FSP	Choosing a program based on university rankings	-3	-0.997
19	ELF	Not using materials in languages other than English	-3	-1.008
14	ELF	Reading academic materials in English	-3	-1.021
8	ELF	Studying in English speaking countries	-3	-1.134
31	IRH	Writing a thesis or dissertation	-4	-1.647
5	IRH	Studying a program that emphasizes research over teaching	-4	-1.843

The Planners

Unlike the previous factor, this group of American students positively valued preparation that might lead to further education, as exemplified in statements related to the core element of the structure of academic programs and the realization of knowledge as national capital that might help them get a better job. However, the array position of statements related to the core AMRU elements (the use of English as a lingua franca, the promotion of autonomy and decentralization of higher education, and flexibility of curriculum and growing stratification of programs/institutions) showed that these three elements had more of a negative value for this group of students. The array position of statements and *z*-scores related to the integration of research into higher education highlighted that these students are particularly neutral about this core element. These findings are presented in Table 7.

TABLE 7: *VIEWS OF AMERICAN STUDENTS: THE PLANNERS GROUP*

Statement number	Element	Statement	Column position	*z*-scores
20	KNC	Learning new knowledge in class	4	1.777
7	KNC	Creating new knowledge	4	1.741
9	SAP	Having a graduate degree	3	1.491
29	PAD	Getting preparation to be autonomous	3	1.090
13	KNC	Obtaining a university degree to get a better job	3	1.056
17	PAD	Developing independent learning	3	1.028
23	PAD	Getting a degree without government intervention	-3	-1.301
19	ELF	Not using materials in languages other than English	-3	-1.335
35	SAP	Having incremental graduation requirements	-3	-1.366
11	PAD	Studying at a university with little bureaucracy	-3	-1.370
10	FSP	Being able to transfer from one institution to another	-4	-1.527
4	PAD	Studying a program that has minimal legal regulations	-4	-1.816

The Pragmatic

This group of American students held a view that seemed contrary to that of the planners and an extreme version of the market-oriented group. These students decisively placed all statements related to the understanding of knowledge of as national capital in array positions with the highest positive value, and therefore having the highest *z*-scores. Also, they assigned negative values to statements related to the integration of research into higher education. They were seemingly either undecided or neutral about the remaining core elements of the AMRU. Table 8 presents these findings.

TABLE 8: *VIEWS OF AMERICAN STUDENTS: THE PRAGMATIC GROUP*

Statement number	Element	Statement	Column position	*z*-scores
13	KNC	Obtaining a university degree to get a better job	4	1.933
33	KNC	Studying to succeed economically	4	1.889
1	KNC	Acquiring knowledge that makes me more competitive	3	1.769
25	KNC	Getting preparation to be a professional leader	3	1.263
14	ELF	Reading academic materials in English	3	1.011
20	KNC	Learning new knowledge in class	3	0.889
5	IRH	Studying a program that emphasizes research over teach	-3	-1.279
12	IRH	Publishing research studies	-3	-1.534
18	IRH	Conducting research in class	-3	-1.604
26	ELF	Improving my English proficiency	-3	-1.716
31	IRH	Writing a thesis or dissertation	-4	-1.738
24	IRH	Improving research skills	-4	-1.820

Arab Undergraduate Students

The Investors

This group of students placed positive value on three core elements of the AMRU: understanding of knowledge as national capital, the use of English as lingua franca, and flexibility of curriculum and growing stratification of programs/institutions. On the other hand, they placed low negative value on the elements of structuring academic programs in three tiers and the integration of research into higher education. However, they placed zero value on the element of the promotion of autonomy and decentralization of higher education. The findings for this group appear in Table 9.

TABLE 9: *VIEWS OF ARAB STUDENTS: THE INVESTORS GROUP*

Statement number	Element	Statement	Column position	*z*-scores
13	KNC	Obtaining a university degree to get a better job	4	1.864
33	KNC	Studying to succeed economically	4	1.788
20	KNC	Learning new knowledge in class	3	1.615
8	ELF	Studying in English speaking countries	3	1.364
14	ELF	Reading academic materials in	3	1.322
25	KNC	Getting preparation to be a professional leader	3	0.838
30	IRH	Taking classes that integrate theory, research and practice	-3	-1.109
18	IRH	Conducting research in class	-3	-1.167
31	IRH	Writing a thesis or dissertation	-3	-1.225
9	SAP	Having a graduate degree	-3	-1.467
27	APS	Taking Graduate Courses	-4	-1.559
15	APS	Following the bachelor-master-doctorate sequence	-4	-1.661

The Creators

Participants in this factor highly valued the core AMRU element of understanding knowledge as national capital. They also positively valued the integration of research into higher education. However, they negatively valued the use of English as lingua franca, the structuring academic programs in three tiers, and the flexibility of curriculum and growing stratification of programs/institutions. In addition, just like the previous group, this group of Arab students felt neutral regarding the promotion of autonomy and decentralization of higher education. Their views are presented in Table 10.

TABLE 10: *VIEWS OF ARAB STUDENTS: THE CREATORS GROUP*

Statement number	Element	Statement	Column position	*z*-scores
13	KNC	Obtaining a university degree to get a better job	4	2.110
20	KNC	Learning new knowledge in class	4	1.708
33	KNC	Studying to succeed economically	3	1.695
7	KNC	Creating new knowledge	3	1.484
25	KNC	Getting preparation to be a professional leader	3	1.246
24	KNC	Improving research skills	3	1.202
27	SAP	Taking graduate courses	-3	-0.819
19	ELF	Not using materials in languages other than English	-3	-0.830
22	FSP	Taking distance learning classes	-3	-1.065
8	ELF	Studying in English speaking countries	-3	-1.466
21	SAP	Studying more than four years at a university	-4	-2.036
26	ELF	Improving my English proficiency	-4	-2.135

The Progressives

In addition to valuing and understanding knowledge as national capital, this group of participants was particularly attracted to the traditional 3-tier structure of academic programs. However, they negatively valued the integration of research into higher education and the flexibility of curriculum and growing stratification of programs/institutions. Similar to those in the two previous groups, these students negatively valued flexibility of curriculum and growing stratification of programs/institutions and the integration of research into higher education. Their views regarding the use of English as lingua franca and the promotion of autonomy and decentralization of higher education were seemingly neutral. Table 11 presents these findings.

TABLE 11: *VIEWS OF ARAB STUDENTS: THE PROGRESSIVES GROUP*

Statement number	Element	Statement	Column position	*z*-scores
13	KNC	Obtaining a university degree to get a better job	4	1.937
26	ELF	Improving my English proficiency	4	1.695
1	KNC	Acquiring knowledge that makes me more competitive	3	1.462
2	APS	Studying a demanding graduate program	3	1.430
25	KNC	Getting preparation to be a professional leader	3	1.393
20	KNC	Learning new knowledge in class	3	1.379
10	FSP	Being able to transfer from one institution to another	-3	-1.177
5	IRH	Studying a program that emphasizes research over teaching	-3	-1.240
12	IRH	Publishing research studies	-3	-1.261
21	APS	Studying more than four years at a university	-3	-1.267
3	FSP	Taking courses without prerequisites	-4	-1.352
31	IRH	Writing a thesis or dissertation	-4	-1.528

Distinguishing Statements

Data analysis revealed statistically significant distinguishing statements for each factor of the two groups of students sampled for this study. Distinguishing statements were especially important to consider because they highlighted the domains, or the degree of a given domain, to which participants in a factor were distinct from participants in other factors. Coincidently, these statements had statistically

significant z-scores. The statements are detailed below in both narrative and in Tables 12—17.

American Students

Distinguishing Statements for the Market-Oriented Group.

Because these students were primarily concerned with obtaining better jobs they placed a high value on developing learning and leadership skills that prepare them to work independently. They highly valued academic and institutional flexibility that facilitate their end goals. They were definitely not in college for the sake of academic work. Therefore, research and publishing were not for them. They were in school in search of instruction. They were not concerned with the type or ranking of the institution from which they obtain their degree from, so long as they get the degree. They wanted to obtain their degree with the least bureaucratic and legal complications. Graduate education for them seemed of neutral value.

TABLE 12: *VIEWS OF AMERICAN STUDENTS: DISTINGUISHING STATEMENTS FOR THE MARKET-ORIENTED GROUP*

Statement number	Element	Statement	Column position	z-scores
17	PAD	Developing independent learning	4	1.91*
25	KNC	Getting preparation to be a professional leader	4	1.91*
10	FSP	Being able to transfer from one institution to another	2	0.89*
2	FSP	Studying a flexible graduate program	1	0.48
23	PAD	Getting a degree without government intervention	1	0.45*
27	SAP	Taking graduate courses	-1	-0.28
11	PAD	Studying at a university with little bureaucracy	-1	-0.72
34	ELF	Getting university instruction exclusively in English	-1	-0.76
12	IRH	Publishing research studies	-2	-0.76*
4	PAD	Studying a program that has minimal legal regulations	-2	-0.96*
36	FSP	Choosing a program based on university rankings	-3	-1.00*
5	IRH	Studying a program that emphasizes research over teaching	-4	-1.84

(P < .05; asterisk (*) Indicates Significance at P < .01)

Distinguishing Statements for the Planners Group.

Students in this factor strongly valued having a graduate degree and developing independent learning. Because they were considering and preparing for future opportunities, they cared about the structure of the higher education system. They were interested in academic work and therefore wanted to see research integrated into higher education. They also encouraged some level of autonomy. Unlike the previous group, and because they valued education as a means for academic training, they were not bothered by processed dominated by institutional bureaucracy and legal regulations.

TABLE 13: *VIEWS OF AMERICAN STUDENTS: DISTINGUISHING STATEMENTS FOR THE PLANNER GROUP*

Statement number	Element	Statement	Column position	z-scores
9	SAP	Having a graduate degree	3	1.49*
29	PAD	Getting preparation to be autonomous	3	1.09
17	PAD	Developing independent learning	3	1.03*
2	SAP	Studying a demanding graduate program	2	1.02
15	SAP	Following the bachelor-master-doctorate sequence	2	0.88*
31	IRH	Writing a thesis or dissertation	2	0.85*
32	PAD	Completing administrative processes easily	-2	-1.06*
23	PAD	Getting a degree without government intervention	-3	-1.30*
35	SAP	Having incremental graduation requirements	-3	-1.37*
11	PAD	Studying at a university with little bureaucracy	-3	-1.38*
10	FSP	Being able to transfer from one institution to another	-4	-1.53*
4	PAD	Studying a program that has minimal legal regulations	-4	-1.82*

($P < .05$; asterisk (*) Indicates Significance at $P < .01$)

Distinguishing Statements for the Pragmatic Group.

Students in this group significantly valued obtaining a university degree to get a better job. Therefore, they were studying to be more successful economically. To them, education meant acquiring knowledge that makes them more competitive. For this reason, they were inclined to learning and creating new knowledge in class. However, they were not concerned with publishing research studies, conducting research in class, or improving research skills. Success for this group was measured by the economic status a degree can offer rather than by pursuing academic publication.

TABLE 14: *VIEWS OF AMERICAN STUDENTS: DISTINGUISHING STATEMENTS FOR THE PRAGMATIC GROUP*

Statement number	**Element**	**Statement**	**Column position**	***z*-scores**
13	KNC	Obtaining a university degree to get a better job	4	1.93*
33	KNC	Studying to succeed economically	4	1.89*
1	KNC	Acquiring knowledge that makes me more competitive	3	1.77*
14	ELF	Reading academic materials in English	3	1.01*
20	KNC	Learning new knowledge in class	3	0.89*
7	KNC	Creating new knowledge	2	0.71*
16	FSP	Conducting multidisciplinary work	-2	-0.53
5	IRH	Studying a program that emphasizes research over teach	-3	-1.28
12	IRH	Publishing research studies	-3	-1.53*
18	IRH	Conducting research in class	-3	-1.60*
26	ELF	Improving my English proficiency	-3	-1.72*
24	IRH	Improving research skills	-4	-1.82*

($P < .05$; asterisk (*) Indicates Significance at $P < .01$)

Arab Students

Distinguishing Statements for the Investors Group.

Students in this factor strongly desired global employability. Therefore, it was important to them to study material in English and to use English as lingua franca. Mobility was thus a key factor that they considered when choosing a higher education program. They looked for flexibility in the structure and format of the classes and programs. They were part of a growing segment of students who are globally focused. They saw value in a universally recognized 3-tier system of higher education and the ranking of universities. In addition, this group realized that adequate training in research was an essential skill for global employability.

TABLE 15: *VIEWS OF ARAB STUDENTS: DISTINGUISHING STATEMENTS FOR THE INVESTORS GROUP*

Statement number	Element	Statement	Column position	*z*-scores
14	ELF	Reading academic materials in English	3	1.32*
19	ELF	Not using materials in languages other than English	2	0.83*
3	FSP	Taking courses without prerequisites	2	0.80*
28	FSP	Studying a flexible graduate program	2	0.80*
10	FSP	Being able to transfer from one institution to another	2	0.77*
34	ELF	Getting university instruction exclusively in English	1	0.61*
24	IRH	Improving research skills	-1	-0.65*
36	FSP	Choosing a program based on university rankings	-2	-1.10*
18	IRH	Conducting research in class	-3	-1.17
9	APS	Having a graduate degree	-3	-1.47*
27	APS	Taking graduate courses	-4	-1.56*
15	APS	Following the bachelor-master-doctorate sequence	-4	-1.66*

(P < .05; asterisk (*) Indicates Significance at P < .01)

Distinguishing Statements for the Creators Group.

This group was different from the other two groups of Arab students particularly with regard to the integration of research into higher education. They valued creating new knowledge. Therefore, improving their research skills, taking classes that integrate theory, research and practice, and publishing research studies were viewed as critical attributes of education that could prepare them to be knowledge creators. They viewed the bachelor-master-doctorate sequence of higher education as a viable structure of education. To them knowledge was universal, and so it was important that they improve their language skills, study, and produce knowledge in English.

TABLE 16: *VIEWS OF ARAB STUDENTS: DISTINGUISHING STATEMENTS FOR THE CREATORS GROUP*

Statement number	Element	Statement	Column position	*z*-scores
7	KNC	Creating new knowledge	3	1.48*
24	IRH	Improving research skills	3	1.20*
12	IRH	Publishing research studies	2	0.72*
30	IRH	Taking classes that integrate theory, research and practice	2	0.71*
15	APS	Following the bachelor-master-doctorate sequence	2	0.69*
5	IRH	Studying a program that emphasizes research over teaching	1	0.38*
3	FSP	Taking courses without prerequisites	-2	-0.78
34	ELF	Getting university instruction exclusively in English	-2	-0.78
19	ELF	Not using materials in languages other than English	-3	-0.83*
8	ELF	Studying in English speaking countries	-3	-1.47*
21	APS	Studying more than four years at a university	-4	-2.04*
26	ELF	Improving my English proficiency	-4	-2.14*

($P < .05$; asterisk (*) Indicates Significance at $P < .01$)

Distinguishing Statements for the Progressives Group.

Postsecondary education, for this group, was highly valued as national and personal capital. Therefore, rigorous education and acquiring language skills were viewed as important for positioning within competitive workforces. However, the structure of the educational system and observing the traditional bachelor-master-doctorate sequence was not necessarily of concern. Here, a flexible educational system was perceived as an attribution that facilitates the acquisition of knowledge and language skills.

TABLE 17: *VIEWS OF ARAB STUDENTS: DISTINGUISHING STATEMENTS FOR THE PROGRESSIVE GROUP*

Statement number	Element	Statement	Column position	*z*-scores
26	ELF	Improving my English proficiency	4	1.70*
1	KNC	Acquiring knowledge that makes me more competitive	3	1.46
2	APS	Studying a demanding graduate program	3	1.43*
17	PAD	Developing independent learning	2	1.14*
9	APS	Having a graduate degree	2	1.06*
29	PAD	Getting preparation to be autonomous	1	0.44
34	ELF	Getting university instruction exclusively in English	0	-0.26
15	APS	Following the bachelor-master-doctorate sequence	0	-0.27*
11	PAD	Studying at a university with little bureaucracy	-1	-0.49
18	IRH	Conducting research in class	-1	-0.56
10	FSP	Being able to transfer from one institution to another	-3	-1.18*
3	FSP	Taking courses without prerequisites	-4	-1.35

($P < .05$; asterisk (*) Indicates Significance at $P < .01$)

Consensus Statements for American and Arab Students

Consensus statements highlight the statements with which the students most agreed; they reflect shared similar values and views. These statements are subsequently presented by group in Tables 18 and 19.

American Students

Consensus Statements for All Groups.

Data analysis revealed that American students shared similar views about statements that emphasized preparation to become autonomous, studying more than four years at a university, conducting multidisciplinary work, publishing in English, and taking courses without prerequisites.

TABLE 18: *VIEWS AMONG AMERICAN STUDENTS: CONSENSUS STATEMENTS FOR ALL GROUPS*

Statement number	Element	Statement	Column position			*z*-scores		
			F1	F2	F3	F1	F2	F3
29	PAD	Preparation to become autonomous	1	3	1	0.49	1.09	0.54
21*	SAP	Studying more than four years at a university	0	1	0	-0.24	0.23	-0.15
16*	FSP	Conducting multidisciplinary work	0	0	-2	0.08	0.07	-0.53
6*	ELF	Publishing in English	-1	-1	-2	-0.74	-0.65	-0.43
3*	FSP	Taking courses without prerequisites	-2	-2	-2	-0.84	-1.07	-1.03

(P < .05; asterisk (*) Indicates Significance at P < .01)

Arab Students

Consensus statements for all groups.

Agreement among Arab students clearly focused on obtaining a university degree to get a better job, studying to succeed economically, learning new knowledge in class, reparation to become a professional leader, reparation to become autonomous, conducting multidisciplinary work, publishing in English, completing administrative processes easily, and studying a program that has minimal legal regulations.

TABLE 19: *VIEWS AMONG ARAB STUDENTS: CONSENSUS STATEMENTS FOR ALL GROUPS*

Statement number	Element	Statement	Column position			*z*-scores		
			F1	F2	F3	F1	F2	F3
13*	KNC	Obtaining a university degree to get a better job	4	4	4	1.86	2.11	1.94
33	KNC	Studying to succeed economically	4	3	2	1.79	1.69	1.24
20*	KNC	Learning new knowledge in class	3	4	3	1.61	1.71	1.38

25	KNC	Preparation to become a professional leader	3	3	3	0.84	1.25	1.39
19	PAD	Preparation to become autonomous	0	0	1	-0.14	-0.08	0.44
16*	FSP	Conducting multidisciplinary work	0	1	0	-0.10	0.25	-0.01
6*	ELF	Publishing in English	0	0	0	-0.20	-0.15	-0.38
32*	PAD	Completing administrative processes easily	-1	-1	1	-0.22	-0.23	0.06
4*	PAD	Studying a program that has minimal legal regulations	-1	-1	-1	-0.34	-0.53	-0.81

(P < .05; asterisk (*) Indicates Significance at P < .01)

Discussion

Analysis indicates that significant differences exist in students' perceptions, both within and among the groups of participants and the aggregate of all participants. The results reported above emphasize collective perceptions, which correspond to the purpose of this study to examine Arab and American students' views of the AMRU and to compare and contrast their views.

The use of English as a lingua franca was a factor an element that characterized students' perspectives and views in both the Arab and the American groups of students. Evidently, this element had low or negative value to the American participants except for the *pragmatic group* of students who positively valued reading academic materials in English and getting university instruction exclusively in English. However, for Arab students this element was once positively valued (as with the *investors group*), negatively valued (as is the case with the *creators group*) or reflected mixed views as with the *progressive group* of Arab students.

Structuring of academic programs also had significant value for students in both groups. While American students in the *market-oriented group* assigned neutral or low positive/negative values to this element, the *planners group* positively ranked statements related to this element. Again, the students composing the *progressive group* indicated mixed views of this element. For Arab students, although the structuring of academic programs was of negative value to the *investors group*, it had mixed perceptions for those in the *creators group* and the *progressive group*.

In regard to the core element of flexibility of curriculum and growing stratification of academic programs and institutions, students in both group and in all factors had mixed views and values placing statements of this element all over the array charts. Likewise, students in both groups and for all factors revealed mixed views in relation to the core element of the promotion of autonomy and decentralization of higher education.

The core elements of the AMRU that emphasize the recognition of education as a national/personal capital and the integration of research into higher education are the two elements that reflected most defining and extreme views of students. For example, the *market-oriented* group of American students show cased a population of American students who are so market driven and to whom a college degree is the best way to be more economically enabled over others in the labor market. For them, earning knowledge and theories is a sufficient traditional learning experience as long as it will lead to the degree. As such, this group has no interest whatsoever in conducting or publishing research or emphasize research at any stage of the learning experience. Their focus is on short term goals that are embodied in a degree that will immediately lead to employment and better opportunities. According to the *planners group* of American students, American higher education degree is essential to make them competitively more attractive labor. Plus, it is a step toward possible further education plans.

The *investors group* of Arab students has greater understanding of knowledge as personal and national capital. Studying in an American higher education institution is perceived as a means to gain a degree that makes this group of students more economically successful. Having a degree from an American institution for these students equates to being equipped with new knowledge which, in return, makes them more competitive and enables them to be professional leaders. The focus of this group of participants is on the

immediate outcomes of graduation that mobilize them economically rather than on how courses are designed or structured or if research is an integral part of the learning process or not. Likewise, pursuing a graduate degree or taking graduate courses is least valued for this group. The focus is solely on graduation rather than on pursuing further graduate education. For these students, their educational investment is furthered by studying in an English-speaking country. This group represents a more globalization oriented segment of students who embrace the sort of education that emphasizes the English language as the lingua-franca of a globally connected labor market.

To the *creators group* of Arab students, although academic education is also viewed as a step to be economically successful in life, this group of participants highly value the knowledge and academic skills they gain by studying in an American institution. Learning to be better researchers and being able to disseminate and publish new knowledge is very valuable for this group of students. The structure and design of course matter for these participants because they inspire to gain knowledge through integrated and comprehensive approach to learning that includes theory, research, and practice. To this end, time-to-graduation is not an issue for this population of students as long as the educational process leads to gaining and creating new knowledge. Unlike the *investors group*, this knowledge can be pursued anywhere and in any language. However, it is important that this educational training process is administratively controlled, structured, and follows the traditional bachelors-masters-doctorate degree sequence.

The *progressive group* of Arab students holds peculiar views about education at a Western institution. For this group of participants, education is not only an economic empowering tool. An academic degree from an American institution is viewed as a status that authorizes the degree holder to be in position to act and lead in society. Gaining education in an English-speaking country is perceived to be rigorous and prepare graduates to be effective and proactive workers. This group of students does not place high value on the regulation of educational process or how learning is approached. That is, conducting research is not considered as a valuable skill that they need to learn or practice in order to obtain the academic degree.

During the course of this research study, the focus of the researchers was on analyzing and understanding all views of both group of participants sampled for this study as manifested by the factors particular to each group. Although the focus was on understanding positive and negative values, neutral views or views that had zero value on the array charts were also considered. It is worth mentioning, though, that neutrality towards certain statements could be attributed to lack of understanding or clarity of these statements.

Interestingly, comparing the consensus statements from the two groups highlights that both American and Arab students highly and positively value obtaining a degree from an American research university because they perceive it as a means to better jobs. Conversely, most students sampled in this study do not place high value on doing research and publishing. This certainly could be attributed to the fact that all participants were pursuing undergraduate education at the time the study was conducted.

The student's views discussed above prove that these six core elements of the AMRU (Teichler 1998; Arthur, Brennan and de Weert 2007; Finn 2007; Gill 2008; Wanger, Azizova, and Wang 2009; Yao 2009; Arthur and Little 2010; van Santen 2010; Wang and Wanger 2011), are core values of the model. This study evidently supports the structure of this model specifically. Although other researchers suggest other elements as characteristics of the AMRU, however, this particular study examined six core elements and their viability to students' perceptions of the American research university.

In conclusion, this exploratory study highlights the importance of international and domestic undergraduate student perceptions of the American model of the research university. Focusing on two initial groups of students from the Arab Gulf and the United States, this research study is the first of its kind and, as such, establishes a baseline for ongoing expansion of the line of inquiry. Exploratory in nature, the study only controlled for type of university, namely, the research university. Future studies may focus on other classifications of higher education institutions. In addition, considerations such as age, gender, disciplinary differences, or other demographics may be controlled.

Given growing efforts across the globe to either adopt or adapt the American model of the research university as a means to strengthen national higher education systems and to compete within the global knowledge economy, understanding the perceptions of students educated or influenced by the model is an important addition to the literature that may inform higher education administration and public policy. Hence, this study may contribute to the emerging conceptualization of the research university model that is currently widely emulated around the world. In addition, understanding the perceptions of an important population of international students studying in American higher education institutions, such as Arab

Gulf students, may be of value for university administrators when they endeavor to host students from this region.

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