



## An Examination of the Status of Higher Education in the United Arab Emirates: From Humble Beginnings to Future Challenges

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### ABSTRACT

**Purpose.** The paper aimed to investigate the status of higher education in the United Arab Emirates (UAE), with an eye toward identifying challenges, making recommendations and examine the integration of Western-based higher education in the UAE in order to meet the demands of the UAE's knowledge-based economy. The primary research question was to what extent the development of higher education in the UAE had been the result of interrelated socio-cultural, economic, and political factors. **Methods** An extensive research design was employed to conduct a systematic search for relevant studies using several databases. Peer-reviewed journal articles, news articles, government documents, and international reports on higher education in the UAE were identified to elucidate a variety of issues, events, policies, and practices.

**Findings** The findings demonstrate: first, the UAE government has sought to stimulate scientific progress through the development of higher education as part of a strategy to meet labor demands; Second, the intermingling of Western-based higher education with Islamic traditions has in some cases led to the polarization of the cultural and religious identities of Arab students. Third, while Western-based education has led to the liberation and empowerment of Emirati women, some have expressed concern about a lack of cultural relevance to women's social roles. Fourth, the preference among Emiratis for employment in government entities has resulted in a lacuna of Emiratis in the private sector. **Implications for Research and Practice** The study provides an understanding of the unique structure of the education system in the UAE, and shows how higher education institutions can train graduates to participate in public as well as private sector employment. The study would also contribute to suggesting higher education reforms required to meet the challenges posed by a dynamic market economy.

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## Introduction

Higher education has been an important aspect of the history of the Middle East going back to the 19<sup>th</sup> century when the American model of education was introduced. More recently, the Gulf Cooperation Council (GCC) countries (Bahrain, Kuwait, Oman, Qatar, Saudi Arabia, and the United Arab Emirates) have adopted Western-based higher education programs and established themselves as an emerging hub of higher education (Bridi, 2020; Wilkins et al., 2012). The United Arab Emirates (UAE) and Qatar have become the higher education hubs in the GCC with programs from universities in the US, UK, and France (Alam et al., 2013; Bridi, 2020). Higher education in the UAE is considered one of the central pillars of nation building (Samier, 2015), as it focuses on developing adequate and qualified workers for business and industry, and for fueling growth through a knowledge-based economy with dynamic and diverse sectors (UAE, 2020).

Higher education is also the focus of the UAE's National Strategy for Higher Education 2030, which targets provisions for inclusive and quality education by encouraging innovative teaching and learning to meet the Strategic Educational Vision of 2030 (Ministry of Education - UAE Government, 2020). This includes significant investment in educational reforms, which has led to a burgeoning higher education sector in the country. There are public and private universities including international branch campuses that operate in the UAE, with a large number of students receiving education without having to travel abroad.

Current studies on higher education in the UAE primarily focus on quality assurance. One of the main concerns of such studies is ensuring that the higher education sector meets strategic economic demands. Some authors argue that the higher education sector lacks comprehensive graduate programs (Master and PhD) and produces low quality undergraduate (Bachelor) students (Hijazi et al., 2008). Despite significant investment in the higher education sector graduates are not capable of building the knowledge base of the society. Further, labor market needs cannot be met internally due to a lack of proficient graduates. This is complicated by the reliance on an external labor force to meet demand, cultural challenges, and the structure of educational institutions (Ashour, 2020). Addressing such issues requires more effective educational governance that is geared toward market trends (Jose & Chacko, 2017).

Other studies on higher education in the UAE have focused on specific topics in education that are mainly related to STEM (Science, Technology, Engineering & Math). The purpose of these studies is to improve the delivery of education in fields that the UAE has identified as important for the development of the country. Some authors have attempted to identify learning strategies to overcome poor student performance in, for example, IT (Information Technology) higher education (Al-Qirim et al., 2018). Improving the learning strategies of students is part of a bigger strategy of preparing students to become more innovative entrepreneurs (Saji, & Nair, 2018). Another concern has been the lack of integration of women into STEM. This is due to a number of factors including low enrolment, low number of graduates, and lack of employment opportunities in STEM related fields as well as social barriers, gender stereotyping, and the lack of females in leadership roles (Houjeir et al., 2019). A few authors have pointed out the issues related to discrimination against women in STEM (Patterson & Salim, 2020), despite the fact that women often outperform their male counterparts in STEM subjects (Houjeir et al., 2019). Greater efforts are required by policy-makers to ensure gender parity in STEM (Patterson & Salim, 2020).

The current study adds to the burgeoning literature on higher education in the UAE by providing a different perspective. The authors investigated the status of higher education in the UAE including historical emergence, current structure, and future direction. This was accomplished by developing a comprehensive understanding of the interlinked socio-cultural, economic, and political dynamics that shape higher education and the impact of Western-based academic models, practices, and orientations. The aim was to assess the effects of higher education on Emirati society, identify shortcomings in planning, outcomes, and capabilities, and make recommendations.

The primary research question that animated this study was to what extent the development of higher education in the UAE has been the result of interrelated socio-cultural, economic, and political factors. The objectives of the study were to examine the integration of Western-based higher education in the UAE more generally and Arab culture more specifically, and to appraise the effectiveness of the higher education system in meeting the demands of the UAE's knowledge-based economy.

## Methodology

### *Research design*

The authors addressed the research question and objectives using an "extensive" research design (Sayer, 1992). Extensive research primarily focuses on discovering common properties and general patterns as a whole. The methods used in extensive research include: large-scale survey of the population or representative sample, formal questionnaires, standardized interviews, and statistical analysis.

### *Sampling and population*

The focus of the study was mainly on taxonomic groups that shared similar formal attributes, but need not connect or interact with each other. Testing in extensive research determines how general the particular findings are in the wider population (replication).

### *Research procedure*

A systematic search for relevant studies was conducted. Several databases (Emerald Social Sciences, JSTOR Arts & Sciences, SAGE Journals, Social Science Database, SpringerLink) and search engines (EBSCO, Google Scholar, Web of Science) were used. A search using different combinations of keywords (higher education, educational reform, economic development, social, culture, politics, Western education, colonization, gender, Arab identity, Gulf Cooperation Council, United Arab Emirates) was conducted. Peer-reviewed journal articles, news articles, government documents, and international organization reports focusing on the socio-cultural, economic, and political factors that influence the development of higher education in the UAE were identified. Studies were selected that elucidate a variety of issues, events, policies, and practices in the historical emergence, current structure, and future direction of higher education in the UAE. Given the plethora of information, the authors selected key articles that highlight the critical moments in the development of higher education in the UAE.

## Findings and Discussion

### *Overview of the Western-Based Higher Education in the UAE*

The implementation of higher education from the West to the Middle East has taken place by imposing European models of education through colonization. This process consolidated foreign rule through ideological subjugation. The legitimacy of indigenous knowledge was diminished and replaced with that of the metropole (Kelly & Altbach, 1984; Bridi, 2020). The English education model and the German research university produced the 19<sup>th</sup> century American university. Subsequently, the American model was used to establish universities in places such as Egypt, Turkey, and Lebanon (Altbach, 2004; Bridi, 2020).

The formation of the GCC was in part “to effect coordination, integration and inter-connection between Member States in all fields” (International Relations and Security Network, 1981, p. 2) including education. Objectives included, “to stimulate scientific and technological progress in the fields of industry, mining, agriculture, water and animal resources; to establish scientific research; to establish joint ventures and encourage cooperation by the private sector for the good of their peoples” (International Relations and Security Network, 1981, p. 2). Educational reform included commitments that ensured, “member States shall cooperate to develop programs and curricula of public, higher, and technical education, to ensure high levels of scientific content” and “Member States shall adopt appropriate policies and mechanisms to ensure compatibility between the outputs of higher education and scientific and technical research on the one hand, and the needs of the labor market and economic development, on the other” (The Cooperation Council for the Arab States of the Gulf (GCC), 2001, p. 10). Different policies were implemented that would lead to concrete outcomes including the establishment of universities, development of higher education curriculum, and quality assessment (Bridi, 2020; Mukerji & Jammel, 2008).

Since its inception in 1971, the leaders of the UAE have been encouraging education for natives, and have made significant investments in education. In 1975, only 54 percent of men and 31 percent of women were literate. According to a report by the United Nations Educational, Scientific, and Cultural Organization in 2010 on education in the country, 89 percent of men and 91 percent of women were literate. By 2015, the total literacy rate climbed up to 93 percent (UNESCO, 2020). Amendments to the UAE’s constitution and federal law resulted in the establishment of government subsidized compulsory primary education as well as changes in the educational policies and adherence to educational reforms (Spranza, 2016).

The UAE inaugurated government subsidized higher education programs in 1975 and established the United Arab Emirates University in the city of Al Ain. In 1988, the country founded the Higher Colleges of Technology, followed by Zayed University. The UAE government appointed the Ministry of Higher Education and Scientific Research to govern and develop policies for all the higher education institutions in the nation, though several Emirates have their own local governing bodies to regulate the education sector. Accordingly, education is the responsibility of both federal and Emirate level jurisdictions, and is impacted by policies at both levels (Spranza, 2016).

Presently, the Ministry of Higher Education and Scientific Research under the Commission for Academic Accreditation accredit public universities in the UAE. The foreign universities located in Dubai Emirate come under the Knowledge and Human Development Authority. The Universities under Knowledge and Human Development Authority are accredited in their own countries (e.g., US, Britain, India, Pakistan among others) and are termed free-zone universities since they are branch campuses of international universities having standardized academic systems in their home campuses (CAA, 2012).

The Knowledge and Human Development Authority established a University Quality Assurance International Board, which is also a full-time member of the International Network for Quality Assurance Agencies in Higher Education. The Abu Dhabi Emirate established another agency similar to the Commission for Academic Accreditation called the Abu Dhabi Education Council. The goal of such agencies is to ensure academic standards and quality management through effective operations and an international profile (CAA, 2012). The quality control agencies focus primarily on educational reforms and ensure that education is imparted in a culturally sensitive manner and with respect to local traditions, principles, and values. The curriculums, teaching methodologies, and teaching approaches, are left in the hands of the foreign universities, and are often standardized based on their home campuses.

According to the Knowledge and Human Development Authority report, there were 62 higher education institutions, including 24 international branch campuses in 2017 (KHDA, 2017). Moreover, the nation has become a hub for one of the most competitive higher education markets in the world, with over 100 licensed higher education providers for a population of approximately 10 million (Soomro, 2019). Higher education institutes may be classified into three categories: public, private, and global partnerships. Public higher education institutions are government owned and managed, and Emirati citizens have access to government funded education (UAE, 2019). According to the latest data, 95 percent of girls and 80 percent of boys that are enrolled in the educational system apply for admission to a public higher education institution in their final year of secondary school (Kamal, 2018). Private higher education institutions are required to have both international accreditation as well as accreditation by the Commission for Academic Accreditation. UAE nationals may attend private higher education institutions, though these institutions also have a large number of foreign students enrolled. Some of the key institutions include the American University of Sharjah and Dubai (accredited in the UAE), Sharjah University, Ajman University of Science and Technology, Abu Dhabi University, among others.

In addition, the UAE has also established global partnerships with several universities that setup international branch campuses with a large variety of programs promoting exchange of knowledge and culture (Wilkins & Huisman, 2019). The international branch campuses are located in special zones like the Dubai Knowledge Village and Academic City. Their basic mission is to attract Emirati students that do not go abroad for higher education. In the context of the UAE, however, there is a distinct sense of prestige associated with enrolling in a foreign educational institute, which probably stems from the colonial past of the region that positioned all things Western as modern and progressive. This has resulted in a motivation and aspiration among the Emirati students to accept and participate in a Westernized educational system (Adeniji et al., 2019).

The UAE's current strategic education plan focuses on raising the upper graduation rate to 98 percent from 96.7 percent ([The Cultural Division of the Embassy of the UAE, 2020](#)). The government also aims to be included among the top 20 countries by improving its rating in the Organisation for Economic Co-operation and Development Programme for International Student Assessment. The UAE's National Higher Education Strategy 2030 also requires the government to move forward toward building strong accreditation standards and increasing its academic research programs ([Badry & Willoughby, 2015](#)). The UAE's higher education budget is projected to increase from \$4.4 billion in 2017 to \$7.1 billion by 2023 with enrollments expected to increase from approximately 56% to 66% over the next five years ([Bridi, 2020](#); [U. S. Commercial Service, 2019](#)).

The UAE has been involved in developing international collaborations and establishing private universities. For example, the American University of Dubai was established in 1995 followed by the University of Sharjah in 1997 (a branch campus of the American University in Washington DC). In addition are the Paris Sorbonne University in Abu Dhabi, New York University in Abu Dhabi, and Michigan State University in Dubai, among others. The reason for the establishment of international branch campuses has been the "belief that the recognition and achievements these institutions attained over decades in their native land would be transferable in the implementation of international branch campuses" ([Franklin & Alzouebi, 2014, p. 121](#)). This has resulted in a shift towards higher enrollments in private universities and international branch campuses, with approximately 120,000 students or 70 percent in private universities ([Bridi, 2020](#); [Datta & Vardhan, 2017](#)).

While substantial progress has been made in the educational sector since its inception in the 1970s, some authors have raised important issues that need to be addressed. [Badry \(2019\)](#) suggested that the UAE ought to consider its socio-cultural as well as the demographic group mix to be more relevant in the field of higher education. The introduction of Western-based higher education including textbooks, pedagogical approaches, and cultural attributes undermines local dynamics and issues. This is further complicated by a setting with a diverse demographic group mix, with students from different regions of the world that represent a predominantly expat society. Accordingly, a more nuanced approach to education reform is required and further study of the issues is necessary to prepare the educational sector to meet future challenges.

In addition, the UAE needs to align its higher education curriculum with job market requirements ([Ashour & Fatima, 2016](#)). There is a mismatch between the requirements of the market and the qualifications of graduates. The UAE economy has developed in the primary (extraction and production of raw materials, such as petroleum) and tertiary sectors (service industry, such as tourism) with little development in the secondary sector (manufacturing, engineering, and construction). The primary focus in higher education, however, has been on fields related to STEM. Accordingly, there is a tendency to produce graduates that are not in high demand in the private sector. In addition, some authors claim that in spite of the focus on STEM, many students that enroll in engineering and natural sciences programs in both the public and foreign universities have little foundational preparation. This has raised concerns regarding students' aptitude and ability upon graduation ([Arabian Gazette, 2016](#)). Accordingly, more stringent entrance examinations are required as well as a review of the secondary school system to prepare students for entering university programs.

- *UAE Culture and Western-Based Higher Education*

According to Diallo (2014), there is conflict and tension when students hailing from a traditional Islamic and Arab culture are made to face Western-trained teachers that come from diverse, liberal, and secular backgrounds and thinking. One way such tensions are manifested is through the creation of an identity among Emirati students, which may be based on resistance to 'Westernness' or the imagined colonial subject. Here students perceive their cultural values or religious identity to be undermined, which feeds the large dynamic of identity conflict. Further, Western textbooks may give cause for alienation and resistance owing to the content, which may offend the traditional values and belief systems of Emirati students. Cultural representations that are alien to students may lead them to mutilate their textbooks or even act out in front of their teachers. Diallo (2014) provided examples of students intimidating their teachers and misbehaving in class, as a way of asserting their identity. Several scholars have therefore recommended that in order to bring about effective learning, there is a need for the teachers to become more aware of their positionality, culturally sensitive issues, and personal beliefs, in order not to provoke Emirati students (Ahmed, 2011). Other authors claimed that the teaching methods and content needs to be more culturally adaptable in order to reach Emirati students (Al-Issa & Dahan, 2011).

While higher education in the UAE is targeted at instilling 21<sup>st</sup> century skills, like critical and independent thinking and reflection, Emirati students are more disposed to rote learning and memorization, as they come from a culture that requires people to respect authority without thinking or questioning (Care, 2018). Further, traditional approaches of learning in the UAE include intuitive and experiential learning, rather than the logic based, sequential, and linear learning proposed by Western systems of education. Emirati students may be more likely to benefit from experiential learning and learning by doing approaches (Kolb & Kolb, 2005). Additionally, given the collectivism that characterizes UAE society and culture, it is difficult to encourage and motivate students to perform independently or to be openly ambitious, thus almost defeating the logic of individual grading that is otherwise successful when used with Western students (Khelifa, 2010). Given these perplexing issues, some authors proposed some solutions. Hopkyns (2014) suggested regionally themed textbooks, developing projects that have local relevance or availability, and using examples from Emirati life as effective ways for contextualizing the educational process. The current dependence on Western textbooks may well be undermining the impacts of higher education in the UAE, as these minimally represent Emirati culture (Ahmed, 2011). Further, higher education may be delivered in Arabic, which may be effective in terms of engaging students (Hopkyns, 2016).

The issue of language and the introduction of English as the language of instruction in many schools has also raised concerns. There is a growing body of literature on the impact of 'Englishization' on Emirati culture (Ahmed, 2011; Badry, 2011; Raddawi & Meslem, 2015; Weber, 2011), especially given the low Arabic literacy level among students in the UAE. The Arabic language is considered a crucial link with Arabic traditions, and the use of English in higher education institutions as the medium of teaching and dialogue is considered a threat to the local culture and identity (Hopkyns, 2014) and associated with casting of the Arabic language and culture as the 'other' in

its own land (Ahmed, 2011). This has led to a perception of cultural fragility and brought forth several initiatives like the Kalima Project or the Word Project, where the Abu Dhabi Authority for Cultural Heritage aimed to translate books from foreign languages to Arabic (Buckingham, 2016). Buckingham's (2016) study on issues related to the impact of the English language on Emirati culture found that Emirati students had positive attitudes toward the English language and considered it progressive and necessary. The same study also found mixed perceptions about the impact of the English language on Emirati culture, with half the students believing that the changes were positive or added to Emirati culture and identity, and the other half believing that it may be leading to the loss of Emirati culture and identity. Crabtree (2007) claimed that the younger Emirati generation does not identify fully with the older generation and they appear to be more accepting of the changes to their society and life due to exposure to Western-based higher education. Moreover, as the English language becomes more dominant, there is a hybridization of English and Arabic, where local words are used frequently in English conversations and Arabic texts are written in English letters (Buckingham, 2016).

Authors concerned about the introduction of Western-based paradigms into the UAE's educational system have also raised issues related to gender. While some scholars are of the opinion that a Western-based education has led to the liberation and empowerment of Emirati female students, others have expressed concern about the lack of cultural relevance that this has had for Emirati women. Khelifa (2010) suggests that there is a growing identity conflict among Emirati women exposed to Western-based higher education, especially as they continue to hold on to core religious beliefs and values, as well as trying to grasp Western values of autonomy, self-assertiveness, independence, and freedom. The author indicates, however, that a transformation in women's attitudes in the UAE is coming because of exposure to the Western systems of education. Recent work by McClusky (2017) found that Emirati women are facing a challenge to retain customs and traditions while adopting a more modern outlook on life.

Other authors have raised issues related to gender and enrolment in the UAE. While enrolment in higher education in many developing countries in Asia is much higher for men than women, in the UAE the reverse is the case with 77 percent of Emirati women enrolled in higher education compared to only 70 percent of men (Ridge, 2009). Further, recent data from the country's three federal higher education institutions shows that an overwhelming 80 to 90 percent of students are women. Male students that have employment opportunities following their secondary education often prefer working rather than pursuing higher education. Male students find employment in military, police, or are deployed into family businesses. Additionally, a large number of male students are likely to go abroad for further studies (Pennington, 2017). Such opportunities are not available to female students, which increases their likelihood of pursuing higher education in the UAE.

In addition to having lower male enrolments, male students also tend to have a higher dropout rate and do not graduate. Some authors found that female undergraduate students had statistically significant higher scores than males, though this was not the case for married female students. In addition, other studies found higher academic performance among female Emirati students compared to males in higher education in the UAE



(Thomas et al., 2012). According to Abdulla (2005), an interesting rationale behind higher female enrolment in higher education was the way 'education duration' was perceived by Emirati society as 'waiting time' before marriage. Additionally, education was perceived as enhancing the chances of an Emirati female getting a better match for marriage (Sumaya et al., 2014). Further, higher education was also considered necessary for attaining certain skills or knowledge that could be somehow translated into being a better wife and mother in the future (Sukumaran, 2013).

These presumptions largely stem from the socio-cultural and religious values of the country, where women are expected to conform to the traditional roles of mother, wife, and housemaker, and to give more importance to those roles, rather than to their jobs or to contributing to the economic wellbeing of their families. Abdulla (2005) also reported that these motivations were further supported by the family, though the motivation also extended to include a sense of security for the female in case of divorce or widowhood. In some cases, Emirati women wanted to acquire higher education for their personal satisfaction and ambition as well, but the predominant rationale was education's role in supporting the future of the woman, either in terms of acquiring a suitable husband, or having security in case of not getting married (Wells & Honan, 2014). In spite of the rather typical cultural perceptions and motivations regarding enrolment, the fact remains that a very large number of Emirati women are now in higher education and this can lead to a skewed workforce demographic group in the future. Emirati women continue to adhere to cultural traditions related to the 'code of modesty' that require them to stay segregated from non-family male members, and hence restricts them from participating in many jobs that require them to work with male colleagues (Abdulla, 2005). Additionally, women are required to manage their families and hence their careers may not be a priority.

Given the higher number of Emirati women in higher education, some authors highlighted the possible negative outcomes of such a scenario including a lack of adequate number of educated professionals to partake in the workforce and contribute to the economic development of the country. Employment data from the UAE shows that only 36.6 percent of Emirati women compared to 65.2 percent of Emirati men participated in the workforce in 2017. Further, it may also have serious repercussions on Emirati society, as is already indicated by the trend in declining rates of marriages. Highly educated Emirati women may want to marry men with similar educational levels. It is therefore desirable to encourage female Emirati students to think of education as a pathway to their future careers (and not just marriage), as well as to encourage more Emirati men to enroll and complete their education (Pennington, 2017).

According to Madsen and Cook (2010), Western-based higher education has led to a transformative change in Emirati women's identities, roles, and contributions to society. Emirati women have been influenced by their teachers, role models, and are learning to develop independent thinking and reflection skills. This transformative learning has equipped Emirati women to face a complex world and to have a novel perspective regarding their self-efficacy and independence. The authors predicted that such transformative changes in women would be translated into a change in the society as a whole, empowering women to take independent decisions and to rely on their own ability to think critically and make decisions.

- *Economic and Political Issues*

With greater emphasis on 'profit-making' in educational circles as well as decrease in funding for public education in Western countries many universities have made attempts to expand their services to other countries. Knight (2002) stated that the General Agreement on Trades in Service removed barriers to services in the same way this has been done for manufactured goods. The result has been less emphasis on public education as an important and fundamental aspect of society and a reduction in the quality of education. The context in which this has occurred has been one of neo-liberalization of the economy and the subsequent commodification of education (Girdzijauskaitė et al., 2019). The result has been the proliferation of international branch campuses from Western universities for the purpose of increasing revenue streams. Altbach (2015, p. 2) claimed that education has been "increasingly seen as a commodity to be purchased by a consumer in order to build a "skill set" to be used in the marketplace or a product to be bought and sold by multinational corporations, academic institutions that have transmogrified themselves into businesses, and other providers". This has had a significant impact on education as well as the impetus to 'export' such services to 'new markets'.

Among the new markets has been the GCC in general and the UAE in particular. For example, in Dubai alone enrollments increased from 33,500 in 2011/2012 to 46,000 in 2015/2016 (U. S. Commercial Service, 2019). The rise in enrollments in the UAE may be due to: first, an increase in the population (from 4.6 million in 2005 to 9.9 million in 2020 with a predicted increase to 10.3 million by 2025) (World Bank, 2019; PopulationPyramid.net, 2019). Second, the incentive for Western universities to locate in the UAE given Dubai's and Abu Dhabi's attractions as centers of higher education and economic development in the Middle East region. Third, the increasing demand among Emiratis for Western-based educational institutions and programs with higher educational standards (Bridi, 2020; Colliers International, 2018).

Some authors claim higher education in the oil-rich gulf countries, including the UAE, does not provide extensive economic utility to the nation, as it produces graduates that have assured and sheltered public sector jobs. Further, the number of jobs in the private sector are limited given the number of Emiratis seeking mostly higher-ranking positions (Nicks-McCaleb, 2005), while a large expatriate workforce occupies 91 percent of all private sector jobs. In addition, most Emiratis continue to enjoy substantial benefits in the form of education, healthcare, governmental services, and a high quality of life, which may lead to a lack of motivation to participate in higher education (Kumar, 2018).

Given such challenges, some authors have raised concerns about the effectiveness of higher education to address the country's vision of sustainable growth and development, which ultimately is fueled by an adequate and qualified Emirati workforce (Jamal, 2019). The problem appears to be one of misalignment between higher educational outcomes and labor market requirements. The majority of the higher educational institutions in the UAE tend to offer a limited number of courses with primacy given to business and economics, information technology, and engineering (Jeffery et al., 2019). This has raised concerns about the effectiveness of

higher education institutions to serve prominent sectors of the UAE economy such as petrochemicals and energy, manufacturing, media and communications, hospitality and tourism, logistics, construction, and e-commerce (Kamal, 2018). Moreover, some fields in the social sciences such as political science, philosophy, among others, are completely missing from the curriculum. This has raised concerns about developing a well-rounded, open, and empathetic workforce that is capable of critical thinking and articulate communications (Kelderman, 2018).

In addition to the fact that the higher education options are limited, a recent study by Ashour and Fatima (2016) found that employers are largely unsatisfied with the quality of graduates. This has been attributed to the lack of cultural contextualization of the educational environment, curriculum, and delivery modes. Further, the fact that many Emirati graduates are seeking employment in sectors like banking, accounting, and business indicates short term orientation in educational planning as these jobs are expected to become extinct with automation and AI related technologies that are increasingly getting deployed (Badry, 2019).

While the UAE planned for Emiratization (the initiative by the UAE government to employ its citizens) of its public and private sectors, such efforts were undermined by the reluctance of Emirati graduates to join the private sector. Governmental services in the UAE are associated with prestige and higher social status coupled with generous salaries, comfortable working conditions, and lower number of working hours (Yaghi & Aljaidi, 2014). The UAE government, however, recognizes that future growth will entail public/private partnerships as part of a diversified economy that requires Emirati graduates to participate in the private sector. Well-trained graduates in small and medium scale industries that focus on innovation-led development, in part, fuel economic growth (Al-Abd et al., 2014). The higher educational system, however, continues to mostly produce graduates that are skilled in technical, accounting, or business management (Jeffery et al., 2019), but may not have the motivation or the willingness to set up entrepreneurial projects that contribute to the economy.

In addition to economic issues has been the political structure of the UAE and its effects on higher education. The UAE is a political monarchy, which has a unique impact on the development and implementation of any reforms, including educational reforms and policies. In particular, the UAE government has made significant efforts to modernize the country through a variety of educational reforms while simultaneously retaining its cultural and traditional identity (Romani, 2009). According to Davidson (2012), such reforms have largely taken a 'top-down' approach rather than organically evolved out of the society's own culture and identity.

Furthermore, while the country has sought relevant advice and expertise from Western institutions, the UAE government has been able to generate all of the funding for higher education indigenously (Bonal, 2002). This has allowed the UAE to, on the one hand, benefit from adopting Western educational standards and resources, and on the other hand, retain a level of independence in terms of forging its own higher educational path. Further, unlike the more recent drive globally toward governmental disinvestment and privatization of education, the UAE has maintained an extensive government funded higher education program, which allows all citizens to access publically funded higher education (Green, 1997).

Moreover, higher education has strengthened the political identity of the UAE. Though made up of seven Emirates and politically ruled as a federal state, the people of the UAE originally belonged to diverse tribes and clans. The government has been able to utilize higher education as a binding force for successfully generating a national identity. While in many countries in the Middle East higher education campuses have been the settings for students to fuel anti-government sentiments (Romani, 2009), the UAE has been relatively free from such occurrences. The UAE government, however, continues to hold control over most aspects of education, including content, which is substantially tweaked to generate loyalty to the ruling families and support for governmental agendas (Lanford & Tierney, 2016).

While this has been the case in the UAE, some authors argue that the future may be more turbulent. Changes in the UAE's political system may emanate from a more organic development in the sensitivities of the population that result from a Western-based education system. Higher education campuses in the UAE provide a safe place for youth to express themselves, experience a multi-cultural setting, and explore new ideas about social justice and political structure (Lanford & Tierney, 2016).

### **Conclusions, Recommendations, and Implications**

In conclusion, since the 1970s, the UAE government has made significant investment in the higher education sector with an eye toward, on the one hand, stimulating scientific progress in the country, and on the other hand, training citizens and residents for the labor demands of a knowledge-based economy. The adoption of Western-based higher education structure as well as curriculum including the introduction of English as the medium of instructions, however, has to a great degree resulted in the marginalization of the cultural and religious identities of many Arab students. Further, while Western-based education has been an important aspect of liberating and empowering Emirati women, there has been much less emphasis placed on the importance of the cultural relevance of women's social roles. Lastly, the primary areas of employment for Emirati graduates has been the public sector due to the high income and benefits associated with such positions. Accordingly, there has been a lacuna of Emiratis that are willing to work in the private sector. Higher education reforms are required that prepare Emirati graduates to meet the demands of a market economy.

The local socio-cultural, economic, and political realities have had a significant impact upon the adoption, implementation, and success of higher education in the UAE. The UAE's 'top-down' implementation of Western-based higher education may not be completely successful in the evolving context of the country's distinct cultural identity. Further, the adoption of Western pedagogical approaches, teaching content, and delivery modes may undermine the government's efforts to maintain its cultural and traditional identity. A more appropriate approach for higher education institutions is for government to allow a more organic development of higher education that contextualizes all learning in accordance with an evolving society and culture. A more balanced approach is therefore needed to ensure that while Western-based higher education leads to knowledge transfer to Emirati students; it also ensures that Emirati students stay connected with their local roots and the community's cultural perspectives.

In addition, the unique structure of Emirati society, where young men are largely able to get employment at an earlier stage while young women continue their education until they get married, has a powerful impact on higher education enrollment. This has caused a unique outcome, where unlike many countries in the Middle East, enrollment and completion of higher education programs in the UAE is much higher for females than for males. The UAE government, therefore, faces the challenge of increasing the enrolment and retention rates of males in the country. Further, while higher educational institutions in the UAE are likely to generate a large number of female graduates, many of the graduates are not likely to participate in the workforce. More work needs to be done that encourages women to participate in the workforce while maintaining traditional values and customs. The influence of Western-based education in the UAE has indeed encouraged women to re-think their roles in families and society, and even reduce marriage rates as some women seek employment and pursue a career.

Furthermore, higher education in the UAE has been an initiative largely driven by the motivation to become competitive in the educational sector, with less consideration regarding the creation of a more inclusive and open society. Since the political regime continues to be influenced by traditional and cultural perspectives on subjects like homosexuality and gender equality, the local laws may undermine the ability of the foreign universities to recruit capable professionals. Western-based higher education is also believed to have an impact on the political identity and political leadership of the country, especially as second-generation expat students in the UAE are increasingly desiring citizenship rights.

What is more interesting to note is the relationship between the current economic conditions of the country and higher education. In the context of the economic environment of the country, it was observed that there is less incentive among Emirati students to perform or stay motivated to excel, since the government has traditionally provided jobs and ensured amenities and facilities. This has also translated into lowering the standards of entrance admission criteria for citizens, which ensures larger enrolments, but may end up enrolling unqualified students into higher education institutions. Accordingly, higher education in the UAE is likely to affect the economy, in the worst-case scenario, by putting low quality professionals in the workforce, and in the best-case scenario by its over-focus on STEM courses, which leads to a skewed output in terms of job skills and can cause a misalignment with the job market. There is therefore need to synchronize and empower higher educational institutions with the ground realities so that they are able to generate highly qualified and skilled workforce that contributes toward all sectors of the economy.

The findings from the research contribute to the existing literature on higher education in the UAE in several ways. To begin with, it provides an understanding of the unique structure of the education system in the UAE given the rapid economic development since the 1970s. Unlike other countries that have had a much longer period during which their higher education systems have developed, the UAE's thrust into the global economy as a major producer of petroleum resulted in making rapid adjustments to its education system to meet labor demands. The outcome has been an education system that is Western-based and is not effective at taking into consideration the uniqueness of the cultural (Arab) and religious (Islamic) attributes of the society. More research is needed in this regard to help us understand in what ways the educational system including its curriculum requires reforms that address the cultural and religious uniqueness of the country and the region.

In addition, while the UAE has been successful at integrating more women into higher education, unlike other countries in the Middle East, many women graduates do not enter the labor force. This is in contrast to women in the West, where in general women with higher education often participate in the workforce. The study raises the importance of addressing issues related specifically to women in higher education in the UAE. Here more studies are needed to address the traditional values and customs of women in the UAE and the impact this has on the lack of participation in the workforce despite the fact women have the credentials to do so.

Lastly, the study builds on research that examines the UAE's over-focus on STEM in higher education by demonstrating some of the drawbacks, rather than advantages, that such an over-focus produces. This is demonstrated by the lack of Emiratis that are trained for the diverse fields that are required by the country. Addressing this will allow higher education institutions to train graduates that not only participate in public sector employment, but also the private sector given the diverse requirements of the growing economy. More research about the higher education programs and their ability to address the vast requirements of the market economy in the UAE are needed.

The study has some limitations. First, given that the research design is extensive, and therefore draws on general findings from secondary sources about higher education in the wider population of the UAE, it lacks a more intensive analysis. Accordingly, the study would benefit from a research design that includes, for example, interviews with personnel from the Ministry of Education, students, professors, and so on that would allow for a deeper understanding of the issues that were raised in the study. Second, the authors were not able to secure statistical data about higher educational institutions in the UAE due to the private nature of such data. Accordingly, the data that was available was not comprehensive and therefore limited the effectiveness of the analysis. Third, the study would benefit from comparisons with other countries, such as Qatar, that have had a similar development in their higher education models. This would be beneficial in terms of not only identifying similar issues, but also addressing the diverse challenges that newly developing countries in the GCC face as they attempt to develop their higher education sector.

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